5 December 1969

MANAGEMENT SUPPORT

SUPPORT SERVICES DIVISION NARRATIVE

A. Accomplishments:

Approximately 3,000 square feet of space formerly a part of the film library has been converted into an ADP area to accommodate Fastrand equipment which will be used in support of the Integrated Information System. The film library space available for this use was a part of the overall space gain which resulted from the installation of mechanized FULLSPACE filing equipment in the film library.

Equipment procurement was begun by the Office of Communications on the Center's behalf toward the installation of a new secure voice system. The new system, which is estimated for completion in FY-1971, will greatly expand the Center's present secure voice capability and will interface with the CIA Green phone system as well as AUTOSEVOCOM.

The Center became a participant in the silver recovery field with the installation of a system which claims silver from hypo solution by an electrolytic process. In addition, the Center has purchased equipment which will permit the recovery of silver from film emulsion. This system will become operational upon completion of the expansion of our so-called incinerator/SOMAT area.

Significant strides have been taken during the past year toward improving and expanding parking facilities for NPIC personnel. Increasing numbers of incidents involving personal harassment and threats and theft and vandalism of automobiles prompted such action.

A new approach to the recruitment, training, utilization and retention of NPIC professional employees was initiated during the year with the adoption of the concept of the Imagery Intelligence Officer (IIO). This concept calls for the rotation of personnel through a variety of assignments as their careers progress thus allowing for broader development and wider utilization of individuals in more senior positions. Our professional recruitment efforts are now being centered on those young people who have the education, interest, aptitude and flexibility necessary to learn the many facets of imagery intelligence.

The Center is currently in the process of automating its personnel records to provide NPIC management with timely, accurate personnel information. The automation process will be accomplished in two phases. Initially, there will be a manual input of the complete position control register into the NPIC computer system. By batch processing methods, the file will be manually updated and, on request, will provide information such as number of positions, number of incumbents, number of PI's, average grade of mathematicians. The second phase will be to put the program into an on-line system with instant input-output. At that time the program will be enlarged to include personal data on employees which could either be analyzed on an individual basis or by category. For example, the education of Mr. "X" could be reported by itself or in relation to all others in Mr. "X's" age group, occupational series or career service.

B. Program Plans:

(1) Objectives -

GENERAL: Provide efficient services in the areas of personnel, security, logistics, training, finance and records management support.

SPECIFIC: Requirements recently levied on the Training Branch plus those which are envisaged for the FY 72-76 period are worthy of special note here.

This Branch has been charged with developing and implementing an IIO Training Program and a NPIC Career Development Program. Among other features these programs will provide for rotational assignments within the Center and to other Agency components. To be effective, the programs will require close supervision and strong management.

The Training Branch must also be expected to support and eventually implement the several training packages presently under development by [redacted] will participate.

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Finally, the Training Branch must address itself to the matter of providing systematic equipment training programs for Center personnel. This would require the development and conduct of such programs for all new equipment delivered to the Center. Although it is expected that most of the new equipment now in development will be delivered to the Center by the end of FY-73, equipment training requirements will continue into the indefinite future.

Constantly increasing training requirements demand a personnel increase.

(2) Resources Required -

With the foregoing additional requirements added to the responsibilities with which the Training Branch is presently charged, it is apparent that some relief in the form of additional personnel is in order. It should beremembered that in addition to handling the usual internal/external training programs, the Branch administers an active student cooperative program (which is still expanding), manages the so-called on-site training program and assumes responsibility for scheduling Center orientation tours and briefings (and, in fact, conducts many of the latter).

In inter-Group discussions on the subject of equipment training programs, it has been generally agreed that two full time instructors will be required for such programs with one having primary responsibility for interpretation equipment and the other for photogrammetric equipment. These two positions should be programmed for FY-1971.

In addition, the Branch believes two additional professional training officers are required to meet all other training demands. Of these two officers, one is needed immediately. The crucial need for the second individual will be somewhat dependent on the timing of training programs suggested by the [redacted] studies. 25X1

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TSSG

PROGRAM NARRATIVES

FISCAL YEAR

1972-1976

TSSG

PROGRAM NARRATIVES

Management Support

Objective - Office of the Chief

The Office of the Chief, TSSG will participate in development and coordination of NPIC plans, procedures, and techniques for the efficient exploitation of new and existing collection systems. This will include determining, in concert with representatives of other members of the intelligence community, future research and development needs. Related efforts also will be undertaken to reduce community research, development, and procurement costs by direct and thorough exchanges of information. **Provides Chairman for EXRAND.**

Objectives - Special Contract and Procurement Staff

a. To solicit proposals, negotiate, administer, and settle R&D contracts in a timely manner and in accordance with good procurement practices.

b. To provide advice and guidance to DD/I elements, and to other Agency elements as applicable, in R&D procurement matters.

c. The Chief, SC&PS, as a member of the Agency Procurement Policy Panel, to represent the interests of the DD/I elements in the consideration of new procurement policies and procedures.

d. To undertake appropriate training in furtherance of performance of Staff mission.

Resources Required

The addition of one GS-12 Contract Specialist to the SC&PS is foreseen for an increase in volume of R&D procurements.

Objectives - Projects and Programs Staff

a. Support the Chief, TSSG by performing analyses of requirements, programs, budgets, and procedures related to TSSG operations.

Objectives - Projects and Programs Staff (Cont'd)

b. Control Group production, providing representative to NPIC Production Management Board, establishing relevant procedures, and maintaining necessary records.

c. Support EXRAND, supplying Executive Secretary and performing all necessary typing and clerical duties.

d. Prepare annual catalog of imagery exploitation equipment for community-wide dissemination.

TSSG/ESD FIVE-YEAR PLAN, FY 1972-1976 PROGRAM NARRATIVES

These narratives are based upon the objective pertaining to equipment test, evaluation and maintenance given under the Imagery Services program element. The given objective has been revised and two new objectives have been added.

FY 1972-1976 FIVE YEAR PLAN

Objective (revised):

Perform the evaluation and testing of equipment/systems acquired or to be acquired by NPIC to ensure suitability and performance before introduction into the NPIC equipment inventory; perform preventive and emergency maintenance of equipment/systems to ensure good operational performance.

Accomplishments:

The Test and Evaluation Branch was taxed to its maximum capabilities during FY-1969 due to a high ratio of projects to test engineers. One co-op student was added to our full-time complement of four test engineers and branch chief. Because of the absence of industrial engineering resources, these same engineers were pressed into the study of industrial engineering problems on an emergency basis such as, the effect of building vibrations on viewing and mensuration, the analysis of operational procedures and the collection of quantitative data on use of equipment. A review of accomplishments shows that 10 test plans were prepared, 12 T&E reports were completed, 49 man-days were spent on trips to contractors plants and 31 man-days were devoted to formal training attendance. Five prototypes were found unacceptable for operational use and returned to the Research and Engineering Division for further development, thereby preventing unsuitable equipment from entering the Center's inventory. In addition, the branch has contributed to the preparation of specifications for future equipment, to proposal evaluations and to the TICOF program.

Thus far in FY-70, the Branch has 4 final T&E reports in production and is working on 4 test projects. In addition, the first phase of a building-wide vibration survey has been completed and results reported. At present considerable effort is being devoted to a study leading to the procurement of instrumentation for measuring the color rendering properties of light tables.

Significant progress was made toward the goal of centralized maintenance. An Instruction was drafted and coordinated with publication expected by the end of the calendar year. Partial implementation of the centralized maintenance concept thus far has resulted in a better understanding of overall maintenance needs, recognition of costs and resources involved and more effective management of the function. A recognized responsible office served to reduce confusion and to eliminate some duplication of effort at least in the requirements planning area.

During the past year from 1 January to 30 November 1969, the Equipment Performance Branch received and responded to 666 requests for miscellaneous emergency services of which approximately 51% were electronic, 35% mechanical, and 14% optical. The requests by operational

components were:

COMPONENT	REQUESTS	PERCENTAGE OF TOTAL
PSG	232	35
IEG	216	32.5
DIA	113	17
IAS	68	10
TSSG	21	2.5
ARMY	16	3
		100%

Under the Preventive Maintenance program, a total of 1726 instruments were serviced. This included cleaning, repairing, lubrication, alignment and replacement of missing or malfunctioning parts. Minor modifications were made as required.

During the past year, 39 new remote stations were connected on-line to the Univac Computers. The remote equipment includes Teletype Printers, Kleinschmidt Printers, CRT Display Units and various types of mensuration instruments. As of 1 December 1969, there is a total of 65 remote on-line stations in [redacted] Fifteen additional stations are scheduled for connection during December.

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Requirements and Authorities:

The purpose of the objective is to test and evaluate equipment/systems to ensure that they are acceptable and suitable for use in the Center and to ensure compatibility with existing systems and equipment prior to and at the time of introduction into the NPIC inventory to prevent an accumulation of unsuitable, untried or unused equipment.

The purpose of the maintenance engineering program is to keep in-service, existing equipment/systems in prime operating condition with minimum equipment downtime and in a condition of peak performance. It has been found that proper maintenance and repair is far less expensive than short cycle replacement of unserviceable equipment with new equipment of the same model. As equipment increases in complexity this cost differential increases exponentially.

The test and evaluation program was established and justified on the basis of an Inspector General report, which cited a finding that newly developed/acquired equipment entered the Center inventory with little control and minimal objective analysis of capabilities.

Method of Approach:

The preventive and emergency maintenance program has been established with primary emphasis on a responsive in-house capability to provide emergency maintenance immediately as needed and to treat preventive maintenance on a routine basis. To supplement current

in-house capability, some contractual maintenance is planned, primarily for preventive maintenance where immediate response is not a factor.

The test and evaluation program has also been established with primary emphasis on an in-house capability justified on the fact that uncertain equipment delivery dates, the risk associated with R&D projects, and the necessity for intimate knowledge of intended use requires a flexible, responsive capability. Contractual support will be required but only where it can be applied with minimum risk, i.e. in the development of standard test procedures, methods, techniques and instrumentation.

Alternatives Considered:

The alternatives considered for both programs were to provide both capabilities totally through contractual support. Decreased response time, degree of inflexibility, risk associated with industrial support in time of crises, cost of in-house versus contract support were factors considered in arriving at the stated approach. Also not to be overlooked, is the fact that contractual support requires in-house technically qualified contract monitors to assure that the government gets full value for its expenditures.

Coordination:

Both programs are coordinated closely with the R&D program and the operational components' equipment procurement plans to forecast maintenance and T&E requirements.

Resources Required:

In order to provide in-house support for the equipment/systems planned for future use in NPIC, additional resources will be required. Resource estimates are given elsewhere in the Plan.

Objective (new):

Perform equipment/system modification design engineering, fabrication and installation of improvements required to ensure maximum effectiveness of existing, in-service, equipment/systems. This is an additional objective closely related to the equipment test, evaluation and maintenance objective under Imagery Services.

Accomplishments:

During FY 1969, a total of 150 modification, design and fabrication tasks were completed in support of Center components. The projects included special type eyepiece adapters for microstereoscopes, precision mounts for optical bench carriers and electronic modifications on instruments for on-line use to the computer. These were electronic, mechanical and optical in nature and combinations of the three. Most of these projects were identified through informal discussions with equipment operators about inadequacies in equipment performance.

Requirements and Authorities:

Equipment modifications are required periodically to improve in-service equipment or to correct deficiencies discovered during operation. Since the equipment is essential to NPIC operations, this work is in direct support to the Imagery Analysis and Imagery Services Program Elements.

Method of Approach:

The majority of equipment modification will be accomplished in-house using existing and planned resources of man-power, equipment and work-space. Modification work beyond the capability of these resources will be covered contractually. Major modifications requiring extensive engineering, research and development efforts to change or add to the functions of existing equipment will be referred to the R&D program.

Alternatives Considered:

Increased use of contractual support, increased in-house staffing and elimination of the requirement were considered. While increased contractual effort is an acceptable alternative, a certain amount of in-house capability is required to provide prompt responsive action and to develop and maintain the necessary expertise to apply in emergency situations. As long as the exploitation processes use equipment, the requirement cannot be eliminated, voiding the third alternative. With severe limitation on in-house staffing, an in-house/contractual mix is selected.

Coordination:

Modification efforts involve the components engaged in imagery analysis, imagery services and RD&E and actions proposed to be undertaken are coordinated with those components. Based upon past experience, it is expected that some future requirements will be initiated by them.

Resources Required:

Modification work will continue in the immediate future within the limits of current manpower restrictions. Increased requirements are expected in the planning period due to the advanced nature of the equipment/systems scheduled for installation together with an overall increase in the quantity of equipment to be used in the exploitation process. An increase in resources is predicted and reflected in the Object Class submissions.

Objective (new):

Perform industrial engineering studies and analyses of existing in-service equipment/systems to determine capabilities, limitations, degree of utilization, methods improvement and operational safety. This is an additional objective closely related to the equipment test, evaluation and maintenance objective under Imagery Services.

Accomplishments:

Because of the close relationship of one engineering technology or discipline to another and the nature of the test and evaluation function the Test and Evaluation Branch has already become involved in several projects akin to industrial engineering. The first phase of a building vibration analysis, an environmental study, has been completed and work will continue to determine cause and the effect upon the exploitation process and recommendations for corrective action. Some work has also been done in the field of industrial safety made necessary by a growing realization that the type of equipment, in use and proposed, must be reviewed from a safety standpoint. An equipment survey has been started to determine one element of light table use data based on a statistically valid, sampling of the equipment in daily operational use.

Requirements and Authorities:

This is an internally generated requirement based upon a gap in the knowledge on equipment/system acquisition and application process and in support of equipment/system management decisions. Evidence of need has been recognized from the lack of base-line information on the exploitation process, environmental effects, equipment use criteria, equipment safety and resource control. There is no current, recognized, assigned program generally described in the industrial engineering discipline. The nature of the proposed program is such that it is closely related to the equipment/system maintenance, test and evaluation program objective. The program would be designed to ensure methods improvement, cost reduction, industrial safety, effective utilization of in-service equipment and systems and eventually to lead to definitions of new equipment/system requirements.

Method of Approach:

Principles of industrial engineering including work flow, methods improvement, materials handling will be applied in studies of Center processes to be accomplished by an in-house staff supplemented by contractual resources. Policy and procedures to implement the program will be written in coordination with appropriate components. The functions initially will be assigned to the existing Test and Evaluation Branch to provide a foundation upon which to develop the capability. Milestones will be the completion of studies and recommendations resulting from the application of industrial engineering techniques. One of the first milestones would be to establish accountability and responsibility for the functions.

Alternatives Considered:

Total contractual support is one of the alternatives considered and is practicable to a certain extent. In-house expertise would still be required in order to define the work and to provide technical contract monitorship. The ratio of in-house cost versus contract cost estimated at 3 to 1, favoring in-house support is also considered to be a factor. Another alternative would be to proceed with the gap unfilled. This would mean in actuality that some work will be done as in the past under the guise of other efforts with no real recognition or identification and no fixed responsibility. Some work will be done since industrial engineering is a necessity in productive organizations of the Center's scope. Recognition and full staffing requires management awareness and acknowledgement. The recommended alternative is to establish an in-house/contractual support mix.

Coordination:

This proposal will require management support from other NPIC elements for recognition of the resources required and with OL for personnel recruitment and administrative support and because of the natural interface that the program would have with equipment and property selection, procurement and inventory functions associated with logistics management.

Resources Required:

It is anticipated that trends in the exploitation processes such as the increasing use of advanced equipment and techniques, will lead to a staff requiring the resources reflected in Object Class detail in the 5 Year Plan.

PPS-File

APSD Orig. Contribution to the 5 year plan: Narrative:

TSSG/APSD-277/69
1 December 1969

MEMORANDUM FOR: Chief, Planning, Programming and Budgeting Staff, NPIC

THROUGH: Chief, Technical Services and Support Group, NPIC

SUBJECT: NPIC FY 72-76 Five Year Plan

1. Attached is the TSSG/APSD input to the NPIC FY 72-76 five year plan. The division is totally committed to the Imagery Analysis program element and objectives. However, since those objectives are of a general nature, it was found that APSD accomplishments and program plans could be better set forth by collating them into basic areas of concern, and designing specific objectives to cover them.

2. It is therefore recommended that the following objectives be added to the Imagery Analysis program element:

✓ a. Develop analytical photogrammetric techniques to derive reliable dimensions from image measurements to insure maximum exploitation.

✓ b. Develop and implement a microdensitometric capability to support photo-interpretation and imagery/systems evaluations.

TSSG/APSD-277/69

SUBJECT: NPIC FY 72-76 Five Year Plan

c. Provide continuous day-by-day liaison between NPIC and the various operational image collection components at the National level.

d. Provide guidance and assistance to those planners in the Community actively involved in acquiring the highest quality imagery from current and pending collection systems, and in the optimum reproductions of the products so derived.

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Chief, Applied Photo Science Division,
TSSG/NPIC

Attachment: a/s

Distribution:
Orig - Addressee, w/a
1 - NPIC/TSSG/APSD, w/a

ATTACHMENT to
TSSG/APSD-277/69

TSSG/Applied Photo Science Division's Contribution to the Imagery Analysis Program Element for NPIC FY 72-76 Five Year Plan

I. ACCOMPLISHMENTS

Following by area of concern are the APSD's accomplishments in Calendar year 1969:

A. Analytical Photogrammetry

In the past year, the APSD developed photogrammetric stereo math models for each of the current and pending acquisition systems - giving NPIC a first time capability to provide reliable dimensions via stereo mensuration and data reduction techniques. This work was devoted to APSD's objective of supporting the mensuration activities of photo-interpretation by developing analytical photogrammetric techniques to transform image measurements to reliable object dimensions. In addition, the APSD investigated and implemented techniques of error propagation which will enable the NPIC mensuration photogrammetrists to report computed dimensions with an associated degree of confidence. The division also actively provided technical assistance to support the development of some of the Center's more sophisticated mensuration equipment and to fulfill require-

ments of a sensitive nature from both the DDP/CIA and the DDI/OSR.

B. Microdensitometry

Inherent to the Center's technical maturity in the field of photo scientific exploitation of imagery is the need to provide it with state-of-the-art techniques for the exploitation, evaluation, and mensuration of system products, through the use of microdensitometry. The APSD has in the past year, investigated, supported and devised special techniques which utilize the accuracy of the microdensitometer to measure not only distances but density gradations, to provide accurate measurements of small objects on products of marginal quality. In anticipation that the Center will become more involved in the exploitation of such multi-layered products as color and infrared sensitive films, the division has monitored a contract to investigate color image assessment concepts, using microdensitometric techniques. The final report on this two-year study was completed in November of this year and is now being analyzed for its potential application to image interpretation and diagnostic evaluations.

accomplishment

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SUBJECT: APSD Contribution to the Imagery Analysis Program Element for NPIC FY 72-76 Five Year Plan

The use of microdensitometry in the field of image manipulation has been closely followed. The Center has been in constant contact with the DDS&T/ORD in this area and has supplied them with raw microdensitometric data and technical assistance. The experience and training resulting from this contact will be a valuable asset to the Center in future months.

C. Initial Phase Handling Requirements

A major modification to a current collection system resulted in providing the Community with a double payload for every mission. In order to effectively reprogram targets to be acquired on the second half of these missions, the APSD was given the requirement to assess the cloud cover and film quality of every frame, during the initial phase handling of the product at the processing site. A technique to effectively respond to this task in the time required was successfully worked out and an expeditious dissemination of the results was accomplished. The product not only assists mission planners in economizing on film and in providing additional coverage of targets that could not have been programmed, but also assists the Center in its

planning for the exploitation of the film. The successful implementation of this task has emphasized to planners of a future multiple payload system, the economy and necessity of having APSD personnel actively involved in the initial phase handling and evaluation of their product. The division has also participated in an exercise to determine the operational readiness of another processing facility to process and reproduce products from the more sophisticated current image collection systems. The results of their performance were favorable and the conclusions derived were directly influenced by the observations of the Center's initial phase handling team and an analysis by the division of the products subsequently received. This exercise will have a direct effect on how the products from a future multiple payload system will be processed and reproduced.

D. Product Specifications

Of basic importance to the Center is the need to adequately describe, and then effectively monitor, their specific requirements for film reproductions. This year for the first time since its inception, the Center, largely

through the efforts of the APSD, has provided the Community with a comprehensive set of specifications expressly designed to provide the interpreter with the best possible product from each of the two major current acquisition systems. Procedures, techniques and avenues of communication have been established to the extent that these specifications will provide the base for further specifications on the less sophisticated systems. The same format and philosophy will also apply as new and exotic film products become available. The task of monitoring NPIC reproductions is presently being studied. With the volumes of material anticipated, it has become obvious that some selective sampling techniques will have to be established. Investigations along these lines are being pursued by the division.

E. Operational Support

Throughout the year, over each weekend and holiday the APSD has provided the Center with a continuing flow of operational information essential to the orderly and timely conduct of NPIC functional responsibilities. By maintaining this all hours uninterrupted liaison, primarily

SUBJECT: APSD Contribution to the Imagery Analysis Program Element for NPIC FY 72-76 Five Year Plan

in relation to reconnaissance activities conducted or controlled by the NRO, the JCS/JRC and the OSA/CIA, the division has kept the Center continuously abreast of operational activities. In juxta-position to the acceptance of operational support, the division has provided a total of 15 hard copy Photographic Evaluation Reports (PERs) and approximately 80 cabled evaluation reports on system performance to these operations groups. To further provide intimate customer feedback to planners and manufacturers alike, the division participated in a total of 15 Performance Evaluation Team (PET) efforts performed on two of the major image collection systems. Experience shows that support to the operational components, in the Community, has invariably provided direct or indirect benefits to the Center. This division is currently involved in a study to determine why certain programmed targets are missed during acquisition by one of the most sophisticated "pointing" camera systems. Division analyses of the predicted vs. actual acquisitions of specific targets has resulted in assisting other NPIC components in refining the geodetic positions of many important targets and the

SUBJECT: APSD Contribution to the Imagery Analysis Program Element for NPIC FY 72-76 Five Year Plan

consequent reduction in the number of target misses experienced on these missions. The benefits to the Center of assured continued coverage of these targets is obvious. A further standing operational requirement concerns supporting the NRO in providing the Intelligence Community with PI oriented camera manuals. In the past year four manuals were produced in the division, each aimed toward supplying the PI with the knowledge he needs to fully exploit the products from these sophisticated systems.

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SUBJECT: APSD Contribution to the Imagery Analysis Program Element for NPIC FY 72-76 Five Year Plan

II. PROGRAM PLANS

Photo science and photogrammetry will play increasingly important roles in providing future Center procedures for fulfilling its responsibilities and requirements to the Community. Prior to the FY 72-76 time period these sciences will further mature to a position where their inputs will be a major influence on the quality of the product the Center receives and on the reliability and accuracy of the products the Center produces. FYs 72-76 will see the advent of at least two major new high altitude image collection systems and a continued sophistication of products resulting from other aircraft and drone acquisitions. The preparation of these products to insure optimum interpretability and the reliability of measurements derived from them are two major responsibilities of the APSD. The methods to be used in resolving these commitments are constantly changing as is the emphasis placed on the means in which they are to be pursued. Following by objective are some of the major anticipated efforts that the APSD envisions will have an impact on the current workload and on its future personnel and equipment needs.

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SUBJECT: APSD Contribution to the Imagery Analysis Program Element for NPIC FY 72-76 Five Year Plan

A. Objectives in Analytical Photogrammetry

(1) To remain consistent with the NPIC objectives of obtaining maximum detail from imagery and of improving mensuration capabilities, the division will continue to develop photogrammetric math models for future acquisition systems. Further work will also be directed toward the reduction of measurements [redacted] The reliability of computed dimensions will soon become as significant as the computed values themselves, and the division anticipates continued efforts in this area. The division will also continue to develop techniques applicable to the solution of day-to-day mensuration problems. To this end it will work toward developing a multi-option capability of processing image measurements from any type of acquisition system, and will continue to develop analytical techniques in support of such NPIC mensuration instrumentation as the AP-3 and HPSC.

(2) Resources Required: With the possible exception of some minor consultant needs and a greater emphasis on training of personnel, the APSD does not

envision any significant expenditure of money or the need for additional personnel in this area.

(3) Alternatives: The development of photogrammetric math models can be accomplished by external industrial contractors. The principal advantages of this procedure appear to be the utilization of the contractor's expertise and less commitment of NPIC personnel (photogrammetrists). However, proper performance by contractors first requires their education concerning the mensuration needs of NPIC, their particular mensuration equipment, and those camera systems whose products are, or will be exploited by the Center. Secondly, their performance must be monitored by NPIC personnel who would most logically be the photogrammetrists. Third, their performance is usually dedicated to specific systems which is fine as long as the systems continue to provide inputs or remain in existence with no changes. (The major disadvantage of this procedure is that the application of NPIC photogrammetric talent and experience is either neglected or not fully exploited.)

SUBJECT: APSD Contribution to The Imagery Analysis Program Element for NPIC FY 72-76 Five Year Plan

Additionally, essentially the same amount of time would be spent by NPIC personnel in monitoring and implementing the contract as would be spent in developing the work in-house and further contracts would have to be let for maintenance of the models or for development of modified models. Since division photogrammetrists have demonstrated a capability to produce a quantity of quality math models with a rapid response time, the alternative of contracting such work does not appear to be in the best interests of NPIC.

B. Objectives in Microdensitometry

(1) Following the assumption that the Center should pursue pertinent and potentially profitable techniques for the exploitation, evaluation and mensuration of system products, the division anticipates continued expansion of its microdensitometric capability. Should procedures presently being investigated prove useful in analyzing such new system products as ~~color~~ [redacted] films, and also be of assistance in image/system evaluations, increasingly sophisticated

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requirements can be envisioned. As an example, under the Imagery Analysis portion of the Center R&D five year plan, is a major contract studying Digital Image Manipulation (DIM). Should such an avenue prove its utility in a production environment, the APSD will become the recipient of a digital image manipulation facility by FY 73. Since the input device(s) are microdensitometers, this responsibility logically falls under the division's microdensitometry objectives.

(2) Resources Required: Assuming that the APSD will acquire a digital image manipulation facility in FY 73, site preparation for an environmentally-controlled clean room of at least 20' X 20' should be initiated in FY 72. Digital manipulation of imagery requires a considerable amount of continuous software programming and the need for a dedicated scientific computer with a vast amount of storage capability. The APSD will also need contractual assistance in programming the software. Along with this will be the need for at least two qualified technicians perhaps at

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the GS-11/12 grades who have a knowledge of basic electronics and are dedicated to the exploitation of products through the use of microdensitometry. The need for a dedicated computer engineer expressly involved in DIM is also evident.

(3) Alternatives: The only alternative to the development of a production-oriented microdensitometry capability is not to follow such a course. The advantage of this alternative is that no additional NPIC personnel or funds would be committed. One disadvantage would be that evaluations of imagery and system performance would have to be based entirely on the subjective rather than objective data. A further disadvantage would be the fact that the Center would fall behind the rest of the Community in the fields of objective system analyses, image manipulation capabilities and multi-layer films assessments, all of significant importance to the proper exploitation of products by the Center. An alternative to acquiring a computer engineer would be to

contract out all microdensitometric software programming. However, since the technology of DIM is not static, most programs would be obsolete before division personnel could be trained to understand and use them.

C. Objectives in Initial Phase Handling

(1) Assuming that the proposed new collection systems are launched as presently scheduled, the APSD will need to recruit for the provision of at least an 8 man permanent contingent at the major processing site by FY 72. These personnel will be primarily involved in the initial phase handling of new mission material, in monitoring the reproductions to be provided the Center and Community and in the evaluation of the system's performance, to assist in reprogramming poorly covered targets of concern. They will also be available for any crisis management problem that may arise which would benefit by their quickly providing additional reproductions, evaluations, etc. to the Community.

(2) Resources Required: Unless the Community decides on some exotic means of film reproduction,

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(e.g. film chips) the majority of the equipment needed by the APSD personnel may be standard off-the-shelf items such as rear projection viewers and motorized wind light tables. Augmentation of the permanent contingent will be necessary during the initial phase handling operation on each payload. This will require additional expenditures in travel. It is envisioned that as an interim measure in lieu of a permanent contingent or perhaps as an alternative until the new system is consistently operational, a total of 12 to 14 personnel will be traveling to the site for every payload - necessitating the need for a proprietary aircraft. Barring the cancellation of this new system, present and anticipated requirements demand that at least 8 additional photo technologists be added to APSD ranks by FY 72. The division assumes that any automatic target readout will be conducted at the Center and by other than APSD personnel rather than at the processing site; therefore, no provision for equipment along these lines are contained in the APSD five year plan.

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(3) Alternatives: A special report was provided in August 1969 to the NPIC/TSSG/PPS concerning alternatives to this commitment (Attachment 2 to [redacted] 6 Aug 69). 25X1

D. Objectives in Product Specifications

(1) Now that NPIC has the vehicle for providing its reproduction specifications to the Community, it not only has the responsibility for updating them but for monitoring each reproduction as it arrives at the Center. Continuing advances in reproduction techniques can be envisioned as new products become available and as NPIC exploitation procedures become more sophisticated. By FY 72 it is expected that target oriented reproductions of high priority targets will become a conventional item in NPIC film reproduction requirements. This becomes especially pertinent as new multi-layered emulsions such as tri-pack color and infrared sensitive films are developed and become operational.

The criteria for all reproductions must be provided to the processing site and the need to be fully knowledgeable of processes available which can provide maximum

information to the PI must be fully understood. These products will demand that additional equipment be procured by this division. APSD can also envision that several differing methods of enhancing imagery through the use of special emulsions, or printing and processing techniques will be available and can be provided in-house on a production basis by FY 73. This assumes that the original film will be available to NPIC.

(2) Resources Required: In order to provide the PI with an image enhancement capability, the division will have need for a photographic laboratory and darkroom facilities by FY 72. Such equipment needs as automatic scanning densitometers, photomicrographs, spectrophotometers and microtomes can be foreseen in the FY 73-76 time periods.

(3) Alternatives: Alternatives to this plan would be to consider either the TSSG Exploratory Laboratory or the PSG Photographic Laboratory as a likely place for conducting such services. However, the TSSG Exploratory Laboratory is strictly research-oriented and not designed to accommodate production-oriented requirements. The

ATTACHMENT to
TSSG/APSD-277/69

SUBJECT: APSD Contribution to the Imagery Analysis Program Element for NPIC FY 72-76 Five Year Plan

PSG Photographic Laboratory is strictly a production-oriented lab not specifically designed for conducting technical experiments in photo science. The APSD has the photo scientists, the know-how, and the contacts to provide this type of service to the Community.

E. Objectives in Operational Support

(1) In consonance with the added complexity of pending systems and the planned volume of material which could enundate the Center, the APSD plans to provide expanded liaison with organizations responsible for the direction or control over image collection activities at the National Level. The division anticipates a need to participate to a greater extent in Community planning and discussions concerning the employment of operational systems. Additionally, it plans more frequent liaison visits to a wider range of external organizations and offices, to include operational sites and project facilities. Such operational activities should establish a comprehensive data base of operational information that can be reliably used by the Center in its day-to-day exploitation planning. So that this information can be

readily available and in a sufficiently flexible format, the APSD plans to develop, in participation with PSG/AID, a computerized data base and retrieval system for operational statistics concerning all current image collection operations, and products derived from them. Provision will be made for the information to be extracted in a variety of periodic printouts and summaries. This plan can be accomplished in-house with a minimum amount of equipment or contractual time.

(2) Resources needed: Depending on the needs of Center management and on the complexity of other unforeseen systems, a need for one or two more liaison officers of the GS-11/12 calibre can be anticipated.

(3) Alternatives: An alternative to this plan would be to continue along the same lines as we have in the past, relying on close personal contact and informally structured liaison to accomplish this job. However, this does not allow for the added complexity of new systems or the flood of additional information

presently available to the Center. To consider that operational liaison can remain static will serve only to further isolate the Center from the rest of the Community.

(4) The division plans to continue its efforts in evaluating products from pending and operational systems, attending and hosting Performance Evaluation Team meetings, and in providing the interface between the subjective PI and the objectively-oriented system planners and engineers.

(5) Resources needed: Equipment needed to continue the system evaluation efforts will be along the line of off-the-shelf viewing tables, microscopes and stereoscopes. It is hoped that the additional 8 man contingent at the processing site will be able to provide some assistance in evaluations and special studies, between mission payloads.

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SECRET
(When Filled In)

Component SC&PS/TSSG

Object Class 11

Planning Level $ _____
(Thousands)

Date 8 December 1969

Priority	Item	Unit Price	Quantity	Total Price	Justification/Comments
1	Contract Specialist		1		To handle the increase in contractual requirements commencing in FY 1972. See attached sheet.

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SPECIAL CONTRACTING & PROCUREMENT STAFF
JUSTIFICATION FOR ADDITIONAL PERSONNEL

The request for a Contract specialist is based on the anticipated increase in the workload as follows:

(a) Comparing the 1970 Fiscal Year R&D Budget with the R&D Budget forecast for Fiscal Years 1972 through 1976, there will be an approximate increase of 70% by 1972 Fiscal Year rising to an approximate 102% before 1976 Fiscal Year. These percentages do not include the first run production requirements for new equipment resulting from the R&D program nor the requirements of DD/I.

(b) A recent study conducted by the Office of Logistics covering the Administration of Agency Government Furnished Property has revealed that decentralization of such responsibilities is being considered with such responsibilities being delegated to the individual procurement teams. This will necessitate closer surveillance of the contractor and the equipment in the field.

In addition, for efficient administration of the Special Contracting and Procurement Staff, it is deemed necessary to have an additional individual to act in the absence of the Chief.

SECRET
(When Filled In)

FY 1972-1976 (FIVE YEAR PLAN)

Component TSSG/ESD

Date DEC 1968

Object Class 11 (Personal Services)

Planning Level $ (Thousands)

Priority	Item	Unit Price	Quantity	Total Price	Justification/Comments
Crucial Desirable	- -	- -	3 (1)	- -	FY 72-73. Four engineers, in the optical, electronic and mechanical disciplines will be required to provide in-house modification design, equipment/system improvement support which is in turn required by the increased use of advanced equipment in Center operations.
Desirable	-	-	(1)	-	FY 72. An engineering aide will be required to assist engineering personnel in equipment/system design change work at the junior or lower skill level.
Crucial	-	-	2	-	FY 72-73. Two additional engineers in the electronic and general engineering disciplines will be required to expand the equipment/system test and evaluation program to cope with equipment/systems of greater complexity and to monitor contractual support technically.
Crucial	-	-	1	-	FY 72. One secretary-steno will be required to provide clerical support to the engineering personnel engaged in test and evaluation work.
Crucial Desirable	- -	- -	3 (1)	- -	FY 72-74. Four industrial engineers will be required to staff an activity engaged in methods improvement, cost reduction, equipment utilization work to increase the overall effectiveness of Center operations and to monitor contractor activity in this field.

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FY 1972-1976 (FIVE YEAR PLAN)

Component TSSG/ESD

Planning Level $
(Thousands)

Date DEC '69

Object Class 11 (Personal Services) cont'd

Priority	Item	Unit Price	Quantity	Total Price	Justification/Comments
Crucial	-	-	1		FY 72-74. One general engineer will be required in the industrial engineering program to provide a balanced capability.
Crucial	-	-	1		FY 73. One engineering aide will be required in the industrial engineering program to provide a balanced program and to assist engineers with lower technical skill level work.
Crucial	-	-	1		FY 73. One equipment specialist will be required in the industrial engineering program to provide management of the equipment inventory.
Desirable	-	-	(1)		FY 73. One general engineer will be required in the industrial engineering program to oversee site engineering services.
Crucial	-	-	1		FY 72. One secretary-steno will be required to provide clerical support for the industrial engineering program.

SECRET
(When Filled In)

Component APSD

Object Class 11

Planning Level $-
(Thousands)

FYs 72-76

Date 4 December 1969

Priority	Item	Unit Price	Quantity	Total Price	Justification/Comments
1	"Computer Applications Engineer"		1		With the added responsibility of acquiring a Digital Image Manipulation (DIM) facility by FY 73 comes the need for a "computer engineer" expressly dedicated to programming and modifying programs which utilize data collected via the microdensitometers to provide the PIs with better image quality.
	Microdensitometer Technologists		2		The technologists will be needed to assist in running microdensitometric and macrodensitometric equipment by FY 72. The present Densitometry Section consists of only three personnel which would not be sufficient once the DIM facility becomes operational or to maintain anticipated macrodensitometric requirements should an effective duplicate reproduction monitoring program be initiated.
1	Liaison personnel		2		Additional need for liaison is contemplated as new systems become operational and as new contacts are made. NPIC inputs to operational activities has been growing continuously and the present three man Operational Activities Branch of the APSD is severely pressed to conduct its functions as effectively as they would like. By FY 72, augmentation of personnel will be obligatory.
1	Photo Technologists		8		Memo [redacted] 6 Aug 69, Attachment II provides a comprehensive analysis of the need for these 8 technologists by FY 72. Specific reference to the utilization of these personnel would demand a much higher classified report than is designed for this five year plan.

25X1

SECRET
(When Filled In)

FY 72-76

Component SSD

Object Class 11

Planning Level $ _____
(Thousands)

Date 5 December 1969

Priority	Item	Unit Price	Quantity	Total Price	Justification/Comments
Crucial	2 additional commo personnel (CTC)	GS-08	2		FY-71 through FY-76. Required to augment present commo staff when UNIVAC 9300 series data link equipment is installed in Signal Center and becomes totally commo dedicated.
Crucial	1 additional commo maintenance technician	GS-9/11	1		FY-71 through FY-76. Required as full-time maintenance officer for new secure voice system. Note: each of above requirements will begin in FY-1971.
Crucial	1 additional training officer	GS-11/12	1		FY-70 through FY-76. Required to augment present two-man (professional) training staff in administering current and known future training programs.
✓ Advantageous	2 additional training instructors	GS-11/12	(2)		To establish and implement an equipment training program the purpose of which would be to familiarize users with newly developed equipment and instruct those users in the use of such.
✓ Advantageous	1 additional training officer	GS-11/12	(1)		To additionally augment the Training Branch Staff to meet anticipated increased training demands [redacted]. FY-1972 25X1

SECRET
(When Filled In)

(When Filled In)

FY-72-76

Component TSSG/RED

Object Class 11

Planning Level $ _____
(Thousands)

Date 8 December 1969

Priority	Item	Unit Price	Quantity	Total Price	Justification/Comments
Crucial	Psychologist	GS-13	1		Expanding requirements in the area of human factors research, primarily directed toward in-house support to our operational components, will require the addition of another psychologist to our staff. He will be used primarily for performing in-house data reduction and developing experimental designs with respect to vision studies, PI Test Batteries, and in support of TICOF and other human factors programs.
Crucial	Photo-Scientist	GS-13	1		During FY-70 we began laying a foundation for an expanded program in image analysis, image manipulation, and image restoration in an attempt to lay a broad technical foundation for future R&D programs. Our expanding efforts in this area require the addition of one (1) photo-scientist to help the presently overworked personnel currently assigned to the Imagery Technology Section.
Crucial	Supervisory Photo-Technologist (DC, Advanced Technology Branch)	GS-14	1		With the increased emphasis in image manipulation and analysis and imagery interpretation research starting in FY-70 and continuing through FY-76, the Advanced Technology Branch will expand from its current level of 11 to 15. A Deputy Chief will be needed in order to efficiently direct the efforts of this number of technical people because of the diverse nature of the functions incorporated under this branch. These functions cover a broad spectrum of both contractual and in-house projects in the areas of image manipulation, image analysis, image reconstruction, human factors research, human engineering, and the physiology of vision. This is in addition to the extensive scientific investigations of our in-house Exploratory Laboratory.

(When Filled In)

(When Filled In)
FY-72

Component TSSG/RED

Date 8 December 1969

Object Class 11

Planning Level $ _____
(Thousands)

Priority	Item	Unit Price	Quantity	Total Price	Justification/Comments
*Crucial Dropped	Electro-Optical Physicist	GS-14	1		A physicist will be needed to support the Systems Research Branch in the area of Near Real-Time Exploitation. This area of Research & Development will grow to major proportions during the FY-72 - 76 time frame and will require the acquisition of specialized technical talent in the area of Electro-Optics.
*Crucial Dropped (for now)	Secretary-Steno	GS-06	1		A secretary-steno will be required to support the efforts of the above additional people being added to the Division. NOTE: These personnel have been requested in FY-71 in order that we may recruit and train them to a functioning level during the FY-71 period so that they will be ready to plan and implement a considerably expanded R&D budget during the time frame of FY-72 - 76.

(When Filled In)

(When Filled In)
FY-72 - 76

Component TSSG/RED

Date 8 December 1969

Object Class 11

Planning Level $
(Thousands)

Priority	Item	Unit Price	Quantity	Total Price	Justification/Comments
Crucial	Electro-Optical Engineers	GS-13	2 ✓ (1) FY-72 (1) FY-73		These engineers will be required to implement the expanding exploitation systems required to efficiently interpret Near Real-Time Imagery programs which will be coming to fruition during the planning period.
* Crucial	Optical-Physicist	GS-14	1 FY-72		The growing sophistication of the complex optical systems required for current and future viewing and mensuration systems -- required to exploit the imagery from every more complex acquisition systems--dictates that we must expand our technical expertise in the area of optical design and fabrication. This position for an Optical - Physicist is in direct response to that requirement.
* Advantageous	D&E Technician	GS-08	1 FY-72		Needed to relieve the Physical Scientist from routine time consuming tasks in order to make them more productive.
* Crucial	Physical Scientist (E.E.)	GS-13/14	1 ✓ FY-72		Needed to phase in on real time R&D. Man should have strong background in information theory. Additional ADP Personnel have been requested but are not a part of this exhibit. They are included in the ADP Annex.

(When Filled In)

TRAVEL

OBJECT CLASS 21

	72	73	74	75	76
O/CH	9	9	9	9	9
SC&PS	3	3	3	3	3
PPS	2	2	2	2	2
ESD	10	12	14	14	14
APSD	60	60	60	60	60
SSD	10	10	10	10	10
RED	80	90	90	90	90
	174	186	188	188	188

SECRET
(When Filled In)

FY 72-76

Component Office of the Chief/TSSG

Date 8 December 1969

Object Class 21

Planning Level $ _____
(Thousands)

Priority	Item	Unit Price	Quantity	Total Price	Justification/Comments
CRUCIAL	Management Travel			9	Required travel for: The Chief, The Deputy Chief and The Executive Officer, Technical Services and Support Group. This estimated amount will remain through FY 1972. O/Ch/TSSG

SECRET
(When Filled In)

(When Filled In)

FY 72-76

Component SC&PS/TSSG

Object Class 21

Planning Level $
(Thousands)

Date 8 December 1969

Priority	Item	Unit Price	Quantity	Total Price	Justification/Comments
1	Procurement Support Travel			3	Required travel for: The Chief and one (1) Contract Administrator in the conduct of contract negotiations, administration and settlement. This estimate does not include travel required for purposes of training. The level of [redacted] per year is forseen for the entire 5 year period, FY 72-76. (SC&PS)

25X1

(When Filled In)

Component PPS/TSSG

Object Class 21

Planning Level $ _____
(Thousands)

Date 8 December 1969

Priority	Item	Unit Price	Quantity	Total Price	Justification/Comments
Crucial	Management/EXRAND Travel			2	To support TSSG Management and for travel in support of the Exploitation Research and Development Subcommittee of COMIREX. This minimum amount should take care of the basic travel requirements for PPS through FY 1976. PPS/TSSG

SECRET
(When Filled In)

FY 1972-1976 (FIVE YEAR PLAN)

Component TSSG/ESD

Date DEC 1970

Object Class Travel

Planning Level $ _____
(Thousands)

Priority	Item	Unit Price	Quantity	Total Price	Justification/Comments
~~25X1~~	Travel	[redacted]			FY 72. Increased travel above the FY-1971 level will be required due to a planned increase in personnel, anticipated increase in test, evaluation and maintenance activity and increased travel costs.
rucial	Travel				FY 72 & 73. Increased travel above the FY-1971 level will be required due to a planned increase in personnel, anticipated increase in test, evaluation and maintenance activity and increased travel costs.
rucial	Travel				FY 74, 75 & 76. Increased travel above the FY-1971 level will be required due to a planned increase in personnel, anticipated increase in test, evaluation and maintenance activity and increased travel costs.

SECRET
(When Filled In)

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(When Filled In)

Component APSD FYs 72 through 76

Object Class 21 Planning Level (Thousands) $ —

Date

Priority	Item	Unit Price	Quantity	Total Price	Justification/Comments
1	Initial phase handling trips				These trips will be mandatory since they involve answering a specific Center requirement. This assumes the use of chartered aircraft for 16 specific trips. (More justification attached).
1	Operational readiness tests of "other" processing facilities				These trips will be necessary to answer an [redacted] requirement to determine the operational readiness of their major processing facilities. 25X1
1	Trips to attend Performance Evaluation Team (PET) meetings				These trips are in answer to Center and Community requirements to provide customer feedback to planners and manufacturers of image collection systems.
1	Trips for technical consultation on systems				These trips are the only way to maintain familiarization with current technical modifications to the different collection systems.
1	Technical consultation and familiarization				To discuss with program personnel the technical characteristics of acquisition systems with respect to the development of photogrammetric math models - also - To become familiar with production oriented microdensitometric operations and to exchange technical information regarding microdensitometry and photogrammetry.
			TOTAL		NOTE: This assumes that a small permanent contingent of APSD personnel will be on site at all times and that a chartered aircraft will be available for augmentation of these personnel on specific occasions.

25X1

SECRET

FY-72

TRAVEL FUNDS NEEDED FOR INITIAL PHASE HANDLING

SYSTEM

KH-4B

Five (5) personnel per trip (per diem four (4) days)
Five (5) personnel per trip air fare

SUB TOTAL

Taxi Fare, car rental, etc.

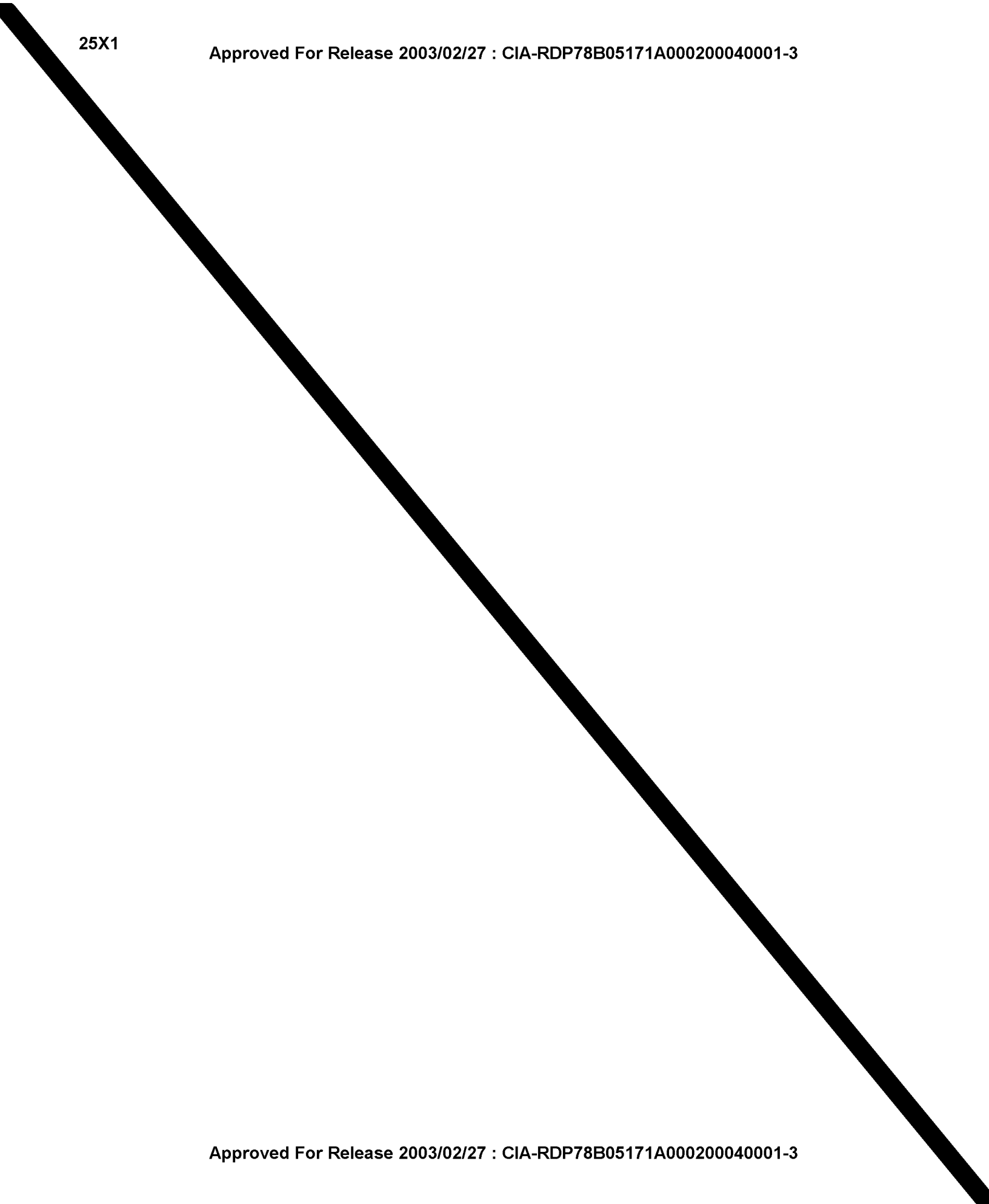
SUB TOTAL

Four (4) missions, two (2) trips per mission

GRAND TOTAL

[redacted] 25X1

[redacted] 25X1



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SECRET
(When Filled In)
FY-1972-1976

25X1

Component SSD

Object Class 21

Planning Level [redacted]
(Thousands)

Date 8 December 1969

Priority	Item	Unit Price	Quantity	Total Price	Justification/Comments
Crucial	Travel			[redacted]	FY-72 through FY-76 25X1 Of this total amount, [redacted] represents local travel paid from petty cash. 25X1

SECRET
(When Filled In)

FY-72 - 76

Component TSSG/RED

Object Class 21

Planning Level $ _____
(Thousands)

Date 8 December 1969

Priority	Item	Unit Price	Quantity	Total Price	Justification/Comments
Critical	Travel (FY-72)			80	This travel is required to:
	Travel (FY-73)			90	1. Monitor Research & Development contracts for the purpose of assuring contractor compliance with technical and contractual specifications and successful delivery of the final product desired. It is an essential element of Research & Development management;
	Travel (FY-74)			90	
	Travel (FY-75)			90	
	Travel (FY-76)			90	2. Review current Government and industrial R&D efforts and determine contractor capabilities and their knowledge of the state-of-the-art; and
					3. Provide technical coordination and liaison with the developers of new acquisition systems to obtain information for the Center's Research & Development effort and for the operational components, on the nature and impact upon the Center's operations of changes in reconnaissance technology;
					4. Contact professional consultants to discuss existing and anticipated problems and attend professional meetings and seminars for the purpose of expanding the technical and managerial capabilities of assigned scientific and engineering personnel.

OBJECT CLASS 23

1972-1976

SSD 9

APSD 6

15 (each year)

FY-1972-1976

25X1

Component SSD

Object Class 23

Planning Level (Thousands) [redacted]

Date 5 December 1969

Priority	Item	Unit Price	Quantity	Total Price	Justification/Comments
Crucial	AP News Service			[redacted]	FY-1972-76
Crucial	Xerox Rental				FY-1972-76 (6th floor xerox)

25X1

SECRET
(When Filled In)

Component APSD

FYs 72-76

Object Class 23

Planning Level (Thousands) $—

Date

Priority	Item	Unit Price	Quantity	Total Price	Justification/Comments
1	Xerox rental		1		Second floor xerox machine.
				TOTAL:	[redacted] per annum.

25X1

SECRET

OBJECT CLASS 25

1972

ESD	231 (181 Maint)
APSD	220
SSD	83
RED	1
	535

SECRET
(When Filled In)

25X1

25X1

FY 1972 (FIVE YEAR PLAN)

Component TESD/TSD

Object Class 25 (Other Services)

Planning Level $
(Thousands)

Date DEC 1970

Priority	Item	Unit Price	Quantity	Total Price	Justification/Comments
Crucial 25X1	[redacted] EQUIPMENT MAINTENANCE (HPSC)				CONTRACT FOR HIGHLY SPECIALIZED REPAIR SERVICES REQUIRED FOR EMERGENCY MAINTENANCE OR MINOR MODIFICATION OF [redacted] HIGH PRECISION STEREOCOMPARATOR. 25X1
Crucial 25X1	[redacted] EQUIPMENT MAINTENANCE (RPV)				Contract for highly specialized repair services or minor modification required for emergency maintenance of [redacted] R.P.V. 25X1
Crucial 25X1	[redacted] EQUIPMENT MAINTENANCE (Data Block Readers)				Contract required to provide specialized repair and maintenance services for [redacted] processing equipment. 25X1
Crucial 25X1	[redacted] EQUIPMENT MAINTENANCE (Comparators)				Contract required to provide specialized repair and maintenance services for [redacted] precision comparators. 25X1
Crucial 25X1	[redacted] EQUIPMENT MAINTENANCE (Analytic Plotters)				Contract required to provide specialized repair and maintenance services for [redacted] analytic plotters. 25X1
Crucial 25X1	[redacted] EQUIPMENT MAINTENANCE (Display Units)				Contract required for highly specialized repair services for emergency maintenance of [redacted] Display Units. 25X1
Crucial 25X1	TELETYPE [redacted] EQUIPMENT MAINTENANCE				Contract required for highly specialized repair services for emergency maintenance of [redacted] printers. 25X1

SECRET
(When Filled In)

SECRET
(When Filled In)

FY 1972 (FIVE YEAR PLAN)

Component DDS&T/ESD

Date DEC 1970

Object Class 25 (Other Services) - cont'd

Planning Level (Thousands) $

Priority	Item	Unit Price	Quantity	Total Price	Justification/Comments
25X1 Crucial 25X1	[redacted] EQUIPMENT MAINTENANCE (Image Comparison Microstereoscopes)				Contract required for highly specialized repair services for emergency maintenance of [redacted] viewing equipment. 25X1 25X1
25X1 rucial	[redacted] EQUIPMENT MAINTENANCE (Dual Viewing Microstereoscopes)				Contract required for highly specialized repair services for emergency maintenance of [redacted] viewing equipment. 25X1
25X1 rucial	[redacted] EQUIPMENT MAINTENANCE (Advanced Rhomboids)				Contract required for highly specialized repair services for emergency maintenance of [redacted] viewing equipment. 25X1
25X1 rucial	[redacted] EQUIPMENT MAINTENANCE (Automated Stereoscanner)				Contract required for highly specialized repair services for emergency and preventive maintenance.
rucial 25X1	[redacted] EQUIPMENT MAINTENANCE (Automatic Target Indexing Device)				Contract required for highly specialized repair services for emergency and preventive maintenance.
rucial 25X1	[redacted] EQUIPMENT MAINTENANCE (Light Tables)				Contract required for highly specialized repair services for emergency maintenance of equipment.

SECRET
(When Filled In)

SECRET
(When Filled In)

FY 1972(FIVE YEAR PLAN)

Component TSSG/ESD

Planning Level $
(Thousands)

Date DEC 1969

Object Class 25 (Other Services) - cont'd

Priority	Item	Unit Price	Quantity	Total Price	Justification/Comments
Crucial	[redacted] EQUIPMENT MAINTENANCE (Processors)	[redacted]		[redacted]	Contract required for highly specialized repair services for emergency maintenance of [redacted] dry silver processing equipment.
Crucial	[redacted] EQUIPMENT MAINTENANCE (Comparators)				Contract required for highly specialized repair services for emergency maintenance of comparator equipment.
Crucial	MAINTENANCE SERVICES (Mathatrons)				Contract required for maintenance of calculating equipment used for analysis and evaluation of film.
Crucial	MAINTENANCE SERVICES (General)				Contract required to provide miscellaneous repair, modification and engineering services for general items of exploitation equipment.
Crucial	INDUSTRIAL ENGINEERING SERVICES				Engineering services will be required to produce studies concerning methods improvement and equipment/system utilization. This work is an augmentation of the limited in-house manpower to produce specialized data for decisions in R&D Management and T&E such as sound and vibration studies, equipment, layout, industrial safety and engineering parameters of equipment performance.

SECRET
(When Filled In)

(When Filled In)

FY 72

Date 4 December 1969

Component APSD

Object Class 25

Planning Level $ _____
(Thousands)

Priority	Item	Unit Price	Quantity	Total Price	Justification/Comments
1	Site preparation for a clean room facility		1		Facilities to accommodate an image enhancement lab and added room for viewing increasing amounts of original film products. Approximately 800 sq. feet of area will be needed to be enclosed in a type 100 laminar flow room with controlled lighting. (See attached). 25X1
1	Site preparation for a DIM facility		1		To establish the appropriate clean room environment for the optimum and efficient operation of a Digital Image Manipulation production capability as developed by NPIC R&D programs.
1	Proprietary Aircraft				With the anticipated addition of a new multiple bucket system, approximately 5 trips for teams of up to 10 individuals must be considered. These trips will be to the main processing facility. Reliance on commercial flights for transportation may seriously delay product processing and consequent receipt of film to the Center.

SECRET

Attachment to APSD 1972-1975 Five Year Plan

SUBJECT: Additional Clean Room Area in APSD

1. An additional 800 square feet of Clean Room area is mandatory in order to adequately satisfy the need for sufficient space needed for the viewing and evaluation of the additional amount of film footage which future systems will provide. A portion of this space is also required to provide a location for a clean area darkroom facility.

2. Present clean room facilities are being taxed to their limit by the evaluation of present amounts of both original negatives. To permit the continuation of proper air flow (a basic parameter of this type of clean room) installation of additional viewing equipment is unadvisable. According to PP&BS figures, our present annual total of 262,000 feet of original material will increase to 978,000 feet by fiscal year 1972. To adequately evaluate this increased film footage, additional viewing equipment and clean room space for its installation is a necessity.

3. A clean area darkroom facility equipped to accomplish production level image enhancement is also planned for incorporation into 800 additional square feet of clean area space. Since original negatives will be utilized in this facility, clean area conditions must prevail.

4. By forecasting future system footage amounts and equipment needs, one can readily understand the need for additional clean room space for APSD.

SECRET
(When Filled In)

Component APSD

Object Class 25

Planning Level $ (Thousands)

FY 72

Date

Priority	Item	Unit Price	Quantity	Total Price	Justification/Comments
1	Contract for Photo Science Support				The need for contractual assistance in providing advanced techniques for analyzing imagery is necessary to stay abreast of potential requirements demanding sophisticated studies.
1	Contract to provide computerized evaluation techniques				With the added volume and complexity of system data now available computerized techniques for collating and manipulating the different system parameters is a necessity. Contractual assistance will be needed in analyzing available information and programming it for its impact on system performance.
			TOTAL:		

25X1

SECRET
(When Filled In)

(When Filled In)

FY-1972

Component SSD

Object Class 25

Planning Level $ [redacted]
(Thousands)

Date 5 December 1969

Priority	Item	Unit Price	Quantity	Total Price	Justification/Comments
25X1 Crucial	[redacted] Consultant Engineering Contract				Previous experience indicates professional engineering consulting services in the amount indicated will be required during this fiscal year for cost estimates, surveys, site preparation planning, etc.
Crucial	GSA Reimbursables				This sum is required for those normally anticipated expenses for which the Center is obliged to fund. Examples of these GSA services are: alterations & adjustments to the air conditioning systems; augmentation of the electrical capability; minor renovations connected with office and equipment space realignment; etc.
Crucial	Eye Examinations				The normal level of cost for the eye examination program.
Crucial	Logistics Equipment Maintenance and Service				Four small job order maintenance contracts and miscellaneous small job requirements. Also, services for gas and oxygen.

25X1

SECRET
(When Filled In)

SECRET
(When Filled In)

FY 1972

Component TSSG/RED

Object Class 25

Planning Level $
(Thousands)

Date 5 December 1969

Priority	Item	Unit Price	Quantity	Total Price	Justification/Comments
Desirable	Card punch/line printer	[redacted]	1	[redacted]	Install this item in the EL area on-line to the NPIC computer. (Site Preparation). FY 1972 only. 25X1

25X1

SECRET
(When Filled In)

OBJECT CLASS 25

1973

ESD	254
APSD	110
SSD	83
	437

SECRET
(When Filled In)

FY 1973 (FIVE YEAR PLAN)

Component TSSG/ESD

Object Class 25 (Other Services)

Planning Level $ (Thousands)

Date DEC 1972

Priority	Item	Unit Price	Quantity	Total Price	Justification/Comments
25X1 Crucial	[redacted]QUIPMENT MAINTENANCE (HPSC)				CONTRACT FOR HIGHLY SPECIALIZED REPAIR SERVICES REQUIRED FOR EMERGENCY MAINTENANCE OR MINOR MODIFICATION OF [redacted] HIGH PRECISION STEREOCOMPARATOR. 25X1 25X1
25X1 Crucial	[redacted] EQUIPMENT MAINTENANCE (RFV)				Contract for highly specialized repair services or minor modification required for emergency maintenance of [redacted] R.P.V. 25X1
25X1 Crucial	[redacted]QUIPMENT MAINTENANCE (Data Block Readers)				Contract required to provide specialized repair and maintenance services for [redacted] processing equipment. 25X1
25X1 Crucial	[redacted] EQUIPMENT MAINTENANCE (Comparators)				Contract required to provide specialized repair and maintenance services for [redacted] precision comparators. 25X1
25X1 Crucial	[redacted] EQUIPMENT MAINTENANCE (Analytic Plotters)				Contract required to provide specialized repair and maintenance services for [redacted] analytic plotters. 25X1
25X1 Crucial	[redacted] EQUIPMENT MAINTENANCE (Display Units)				Contract required for highly specialized repair services for emergency maintenance of [redacted] Display Units. 25X1
25X1 Crucial	TELETYPE [redacted] EQUIPMENT MAINTENANCE				Contract required for highly specialized repair services for emergency maintenance of [redacted] printers. 25X1

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FY 1973 (FIVE YEAR PLAN)

Date DEC 1969

Component TSSG/ESD

Planning Level $
(Thousands)

Object Class 25 (Other Services) - cont'd

Priority	Item	Unit Price	Quantity	Total Price	Justification/Comments
25X1					
25X1 Crucial 25X1	[redacted] EQUIPMENT MAINTENANCE (Image Comparison Microstereoscopes)				Contract required for highly specialized repair services for emergency maintenance of [redacted] viewing equipment. 25X1
25X1 Crucial	[redacted] EQUIPMENT MAINTENANCE (Dual Viewing Microstereoscopes)				Contract required for highly specialized repair services for emergency maintenance of [redacted] viewing equipment. 25X1
25X1 Crucial	[redacted] EQUIPMENT MAINTENANCE (Advanced Rhomboids)				Contract required for highly specialized repair services for emergency maintenance of [redacted] viewing equipment. 25X1
25X1 Crucial	[redacted] EQUIPMENT MAINTENANCE (Automated Stereoscanner)				Contract required for highly specialized repair services for emergency and preventive maintenance.
25X1 Crucial	[redacted] EQUIPMENT MAINTENANCE (Automatic Target Indexing Device)				Contract required for highly specialized repair services for emergency and preventive maintenance.
25X1 Crucial	[redacted] EQUIPMENT MAINTENANCE (Light Tables)				Contract required for highly specialized repair services for emergency maintenance of equipment.

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FY 1973 (FIVE YEAR PLAN)

Component TSSG/FSD

Planning Level $ _____ (Thousands)

Date DEC 1972

Object Class 25 (Other Services) - cont'd

Priority	Item	Unit Price	Quantity	Total Price	Justification/Comments
25X1 Crucial 25X1	[redacted] EQUIPMENT MAINTENANCE (Processors)				Contract required for highly specialized repair services for emergency maintenance of [redacted] dry silver processing equipment. 25X1 25X1
25X1 Crucial	[redacted] EQUIPMENT MAINTENANCE (Comparators)				Contract required for highly specialized repair services for emergency maintenance of comparator equipment.
Crucial	MAINTENANCE SERVICES (Mathatrons)				Contract required for maintenance of calculating equipment used for analysis and evaluation of film.
Crucial	MAINTENANCE SERVICES (General)				Contract required to provide miscellaneous repair, modification and engineering services for general items of exploitation equipment.
rucial	INDUSTRIAL ENGINEERING SERVICES				Engineering services will be required to produce studies concerning methods improvement and equipment/system utilization.
					[redacted]

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Component APSD

Object Class 25

Planning Level S

(Thousands)

FYs 73-76

Date 4 December 1969

Priority	Item	Unit Price	Quantity	Total Price	Justification/Comments
					25X1 With site preparations essentially complete, contract under miscellaneous services will drop back toward the FY 71 level of approximately [redacted] annum. However, it is anticipated that continued contractual assistance will be needed in the area of photo science applications and in microdensitometry.
			TOTAL:	[redacted]	25X1

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(When Filled In)

FY-1973

Date 5 December 1969

25X1

Component SSD

Object Class 25

Planning Level (Thousands) [redacted]

Priority	Item	Unit Price	Quantity	Total Price	Justification/Comments 25X1
25X1 Crucial	[redacted] Consultant neering Contract			[redacted]	Previous experience indicates professional engineering consulting services in the amount indicated will be required during this fiscal year for cost estimates, surveys, site preparation planning, etc.
Crucial	Reimbursables				This sum is required for those normally anticipated expenses for which the Center is obliged to fund. Examples of these GSA services are: alterations & adjustments to the air conditioning systems; augmentation of the electrical capability; minor renovations connected with office and equipment space realignment; etc.
Crucial	Examinations				The normal level of cost for the eye examination program.
Crucial	istics Equipment intenance and Service				Four small job order maintenance contracts and miscellaneous small job requirements. Also, services for gas and oxygen.

SECRET
(When Filled In)

OBJECT CLASS 25

1974

ESD	273
APSD	110
SSD	83
	466

FY 1974 (FIVE YEAR PLAN)

Component TSSG/BSD

Date DEC 1973

Object Class 25 (Other Services)

Planning Level $ (Thousands)

Priority	Item	Unit Price	Quantity	Total Price	Justification/Comments
25X1 Crucial 25X1	[redacted] EQUIPMENT MAINTENANCE (HPSC)				CONTRACT FOR HIGHLY SPECIALIZED REPAIR SERVICES REQUIRED FOR EMERGENCY MAINTENANCE OR MINOR MODIFICATION OF [redacted] HIGH PRECISION STEREOCOMPARATOR. 25X1 25X1
25X1 Crucial	[redacted] EQUIPMENT MAINTENANCE (RPV)				Contract for highly specialized repair services or minor modification required for emergency maintenance of [redacted] R.P.V. 25X1
25X1 Crucial	[redacted] EQUIPMENT MAINTENANCE (Data Block Readers)				Contract required to provide specialized repair and maintenance services for [redacted] processing equipment. 25X1
25X1 Crucial	[redacted] QUIPMENT MAINTENANCE (Comparators)				Contract required to provide specialized repair and maintenance services for [redacted] precision comparators. 25X1
25X1 Crucial	[redacted] EQUIPMENT MAINTENANCE (Analytic Plotters)				Contract required to provide specialized repair and maintenance services for [redacted] analytic plotters. 25X1
25X1 Crucial	[redacted] QUIPMENT MAINTENANCE (Display Units)				Contract required for highly specialized repair services for emergency maintenance of [redacted] Display Units. 25X1
25X1 Crucial	TELETYPE [redacted] EQUIPMENT MAINTENANCE				Contract required for highly specialized repair services for emergency maintenance of [redacted] printers. 25X1

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(When Filled In)

FY 1974 (FIVE YEAR PLAN)

Component ESSG/ESD

Date DEC 1972

Object Class 25 (Other Services) - cont'd

Planning Level $ (Thousands)

Priority	Item	Unit Price	Quantity	Total Price	Justification/Comments
Crucial 25X1 25X1 25X1	[redacted] EQUIPMENT MAINTENANCE (Image Comparison Micro-stereoscopes)				Contract required for highly specialized repair services for emergency maintenance of [redacted] viewing equipment. 25X1 25X1
25X1 Crucial	[redacted] EQUIPMENT MAINTENANCE (Dual Viewing Micro-stereoscopes)				Contract required for highly specialized repair services for emergency maintenance of [redacted] viewing equipment. 25X1
25X1 Crucial	[redacted] EQUIPMENT MAINTENANCE (Advanced Rhomboids)				Contract required for highly specialized repair services for emergency maintenance of [redacted] viewing equipment. 25X1
25X1 Crucial	[redacted] EQUIPMENT MAINTENANCE (Automated Stereoscanner)				Contract required for highly specialized repair services for emergency and preventive maintenance.
25X1 Crucial	[redacted] EQUIPMENT MAINTENANCE (Automatic Target Indexing Device)				Contract required for highly specialized repair services for emergency and preventive maintenance.
Crucial 25X1	[redacted] EQUIPMENT MAINTENANCE (Light Tables)				Contract required for highly specialized repair services for emergency maintenance of equipment.

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FY 1974 (FIVE YEAR PLAN)

Component TSSG/ESD

Planning Level $ (Thousands)

Date DEC 1972

Object Class 25 (Other Services) - cont'd

Priority	Item	Unit Price	Quantity	Total Price	Justification/Comments
25X1 Crucial	[redacted] EQUIPMENT MAINTENANCE (Processors)				Contract required for highly specialized repair services for emergency maintenance of [redacted] dry silver processing equipment. 25X1 25X1
25X1 Crucial	[redacted] EQUIPMENT MAINTENANCE (Comparators)				Contract required for highly specialized repair services for emergency maintenance of comparator equipment.
Crucial	MAINTENANCE SERVICES (Mathatrons)				Contract required for maintenance of calculating equipment used for analysis and evaluation of film.
Crucial	MAINTENANCE SERVICES (General)				Contract required to provide miscellaneous repair, modification and engineering services for general items of exploitation equipment.
Crucial	INDUSTRIAL ENGINEERING SERVICES				Engineering services will be required to produce studies concerning methods improvement and equipment/system utilization.

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(When Filled In)

FY-1974

25X1 Component SSD

Object Class 25

Planning Level (Thousands) [redacted]

Date 5 December 1969

Priority	Item	Unit Price	Quantity	Total Price	Justification/Comments
25X1 Crucial	[redacted] Consultant neering Contract			[redacted]	Previous experience indicates professional engineering consulting services in the amount indicated will be required during this fiscal year for cost estimates, surveys, site preparation planning, etc. 25X1
Crucial	Reimbursables				This sum is required for those normally anticipated expenses for which the Center is obliged to fund. Examples of these GSA services are: alterations & adjustments to the air conditioning systems; augmentation of the electrical capability; minor renovations connected with office and equipment space realignment; etc.
Crucial	Examinations				The normal level of cost for the eye examination program.
Crucial	stics Equipment tenance and Service				Four small job order maintenance contracts and miscellaneous small job requirements. Also, services for gas and oxygen.

SECRET
(When Filled In)

OBJECT CLASS 25

1975

ESD	311
APSD	110
SSD	83
	504

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(When Filled In)

FY 1975 (FIVE YEAR PLAN)

Component ISSG/ESD

Object Class 25 (Other Services)

Planning Level $ _____
(Thousands)

Date DEC 1973

Priority	Item	Unit Price	Quantity	Total Price	Justification/Comments
25X1 Crucial	[redacted] EQUIPMENT MAINTENANCE (RPSC)				CONTRACT FOR HIGHLY SPECIALIZED REPAIR SERVICES REQUIRED FOR EMERGENCY MAINTENANCE OR MINOR MODIFICATION OF [redacted] HIGH PRECISION STEREOCOMPARATOR. 25X1 25X1
25X1 Crucial	[redacted] EQUIPMENT MAINTENANCE (RFV)				Contract for highly specialized repair services or minor modification required for emergency maintenance of [redacted] R.P.V. 25X1
25X1 Crucial	[redacted] EQUIPMENT MAINTENANCE (Data Block Readers)				Contract required to provide specialized repair and maintenance services for [redacted] processing equipment. 25X1
25X1 Crucial	[redacted] EQUIPMENT MAINTENANCE (Comparators)				Contract required to provide specialized repair and maintenance services for [redacted] precision comparators. 25X1
25X1 Crucial	[redacted] EQUIPMENT MAINTENANCE (Analytic Plotters)				Contract required to provide specialized repair and maintenance services for [redacted] analytic plotters. 25X1
25X1 Crucial	[redacted] EQUIPMENT MAINTENANCE (Display Units)				Contract required for highly specialized repair services for emergency maintenance of [redacted] Display Units. 25X1
25X1 Crucial	TELETYPE [redacted] EQUIPMENT MAINTENANCE				Contract required for highly specialized repair services for emergency maintenance of [redacted] printers. 25X1

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(When Filled In)

FY 1975 (FIVE YEAR PLAN)

Component TSSG/ESD

Date DEC 1973

Object Class 25 (Other Services) - cont'd

Planning Level $ (Thousands)

Priority	Item	Unit Price	Quantity	Total Price	Justification/Comments
25X1					
Crucial 25X1	[redacted] EQUIPMENT MAINTENANCE (Image Comparison Micro-stereoscopes)				Contract required for highly specialized repair services for emergency maintenance of [redacted] viewing equipment. 25X1 25X1
25X1					
Crucial	[redacted] EQUIPMENT MAINTENANCE (Dual Viewing Micro-stereoscopes)				Contract required for highly specialized repair services for emergency maintenance of [redacted] viewing equipment. 25X1
25X1					
Crucial	[redacted] EQUIPMENT MAINTENANCE (Advanced Rhomboids)				Contract required for highly specialized repair services for emergency maintenance of [redacted] viewing equipment. 25X1
25X1					
Crucial	[redacted] EQUIPMENT MAINTENANCE (Automated Stereoscanner)				Contract required for highly specialized repair services for emergency and preventive maintenance.
25X1					
Crucial	[redacted] EQUIPMENT MAINTENANCE (Automatic Target Indexing Device)				Contract required for highly specialized repair services for emergency and preventive maintenance.
Crucial 25X1	[redacted] EQUIPMENT MAINTENANCE (Light Tables)				Contract required for highly specialized repair services for emergency maintenance of equipment.

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FY 1975 (FIVE YEAR PLAN)

Component TSSG/ESD

Object Class 25 (Other Services) - cont'd

Planning Level $ (Thousands)

Date DEC [illegible]

Priority	Item	Unit Price	Quantity	Total Price	Justification/Comments
25X1 Crucial 25X1	[redacted] EQUIPMENT MAINTENANCE (Processors)	[redacted]		[redacted]	Contract required for highly specialized repair services for emergency maintenance of [redacted] dry silver processing equipment. 25X1 25X1
25X1 Crucial	[redacted] EQUIPMENT MAINTENANCE (Comparators)				Contract required for highly specialized repair services for emergency maintenance of comparator equipment.
Crucial	MAINTENANCE SERVICES (Mathatrons)				Contract required for maintenance of calculating equipment used for analysis and evaluation of film.
Crucial	MAINTENANCE SERVICES (General)				Contract required to provide miscellaneous repair, modification and engineering services for general items of exploitation equipment.
Crucial	INDUSTRIAL ENGINEERING SERVICES				Engineering services will be required to produce studies concerning methods improvement and equipment/system utilization.

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(When Filled In)

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(When Filled In)

FY-1975

25X1 Component SSD

Object Class 25

Planning Level $ [redacted]
(Thousands)

Date 5 December 1969

Priority	Item	Unit Price	Quantity	Total Price	Justification/Comments
25X1 Crucial	[redacted] Consultant Engineering Contract			[redacted]	Previous experience indicates professional engineering consulting services in the amount indicated will be required during this fiscal year for cost estimates, surveys, site preparation planning, etc.
Crucial	GSA Reimbursables				This sum is required for those normally anticipated expenses for which the Center is obliged to fund. Examples of these GSA services are: alterations & adjustments to the air conditioning systems; augmentation of the electrical capability; minor renovations connected with office and equipment space realignment; etc.
Crucial	Eye Examinations				The normal level of cost for the eye examination program.
Crucial	Logistics Equipment Maintenance and Service				Four small job order maintenance contracts and miscellaneous small job requirements. Also, services for gas and oxygen.

25X1

SECRET
(When Filled In)

OBJECT CIASS 25

1976

ESD	330
APSD	110
SSD	83
	523

FY 1976 (FIVE YEAR PLAN)

Component T&SG/ESD

Object Class 25 (Other Services)

Planning Level (Thousands) $

Date DEC 1974

Priority	Item	Unit Price	Quantity	Total Price	Justification/Comments
25X1 Crucial 25X1	[redacted] EQUIPMENT MAINTENANCE (HPSC)				CONTRACT FOR HIGHLY SPECIALIZED REPAIR SERVICES REQUIRED FOR EMERGENCY MAINTENANCE OR MINOR MODIFICATION OF [redacted] HIGH PRECISION STEREOCOMPARATOR. 25X1
Crucial 25X1	[redacted] EQUIPMENT MAINTENANCE (RPV)				Contract for highly specialized repair services or minor modification required for emergency maintenance of [redacted] R.P.V. 25X1
Crucial 25X1	[redacted] EQUIPMENT MAINTENANCE (Data Block Readers)				Contract required to provide specialized repair and maintenance services for [redacted] processing equipment. 25X1
Crucial 25X1	[redacted] EQUIPMENT MAINTENANCE (Comparators)				Contract required to provide specialized repair and maintenance services for [redacted] precision comparators. 25X1
Crucial 25X1	[redacted] EQUIPMENT MAINTENANCE (Analytic Plotters)				Contract required to provide specialized repair and maintenance services for [redacted] analytic plotters. 25X1
Crucial 25X1	[redacted] EQUIPMENT MAINTENANCE (Display Units)				Contract required for highly specialized repair services for emergency maintenance of [redacted] Display Units. 25X1
Crucial 25X1	TELETYPE [redacted] EQUIPMENT MAINTENANCE				Contract required for highly specialized repair services for emergency maintenance of [redacted] printers. 25X1

(When Filled In)

SECRET
(When Filled In)

FY 1976 (FIVE YEAR PLAN)

Component TSSG/ESD

Date DEC 1975

Object Class 25 (Other Services) - cont'd

Planning Level (Thousands) $

Priority	Item	Unit Price	Quantity	Total Price	Justification/Comments
25X1 crucial	[redacted] EQUIPMENT MAINTENANCE (Image Comparison Micro-stereoscopes)				Contract required for highly specialized repair services for emergency maintenance of [redacted] viewing equipment. 25X1
25X1 crucial	[redacted] EQUIPMENT MAINTENANCE (Dual Viewing Micro-stereoscopes)				Contract required for highly specialized repair services for emergency maintenance of [redacted] viewing equipment. 25X1
25X1 crucial	[redacted] EQUIPMENT MAINTENANCE (Advanced Rhomboids)				Contract required for highly specialized repair services for emergency maintenance of [redacted] viewing equipment. 25X1
25X1 crucial	[redacted] EQUIPMENT MAINTENANCE (Automated Stereoscanner)				Contract required for highly specialized repair services for emergency and preventive maintenance.
25X1 crucial	[redacted] EQUIPMENT MAINTENANCE (Automatic Target Indexing Device)				Contract required for highly specialized repair services for emergency and preventive maintenance.
25X1 crucial	[redacted] EQUIPMENT MAINTENANCE (Light Tables)				Contract required for highly specialized repair services for emergency maintenance of equipment.

SECRET
(When Filled In)

FY 1976 (FIVE YEAR PLAN)

Component TSSG/ESD

Object Class 25 (Other Services) - cont'd

Planning Level ($ Thousands)

Date DEC 1969

Priority	Item	Unit Price	Quantity	Total Price	Justification/Comments
25X1 Crucial 25X1	[redacted] EQUIPMENT MAINTENANCE (Processors)				Contract required for highly specialized repair services for emergency maintenance of [redacted] dry silver processing equipment. 25X1 25X1
Crucial 25X1	[redacted] EQUIPMENT MAINTENANCE (Comparators)				Contract required for highly specialized repair services for emergency maintenance of comparator equipment.
Crucial	MAINTENANCE SERVICES (Mathatrons)				Contract required for maintenance of calculating equipment used for analysis and evaluation of film.
Crucial	MAINTENANCE SERVICES (General)				Contract required to provide miscellaneous repair, modification and engineering services for general items of exploitation equipment.
Crucial	INDUSTRIAL ENGINEERING SERVICES				Engineering services will be required to produce studies concerning methods improvement and equipment/system utilization.

SECRET
(When Filled In)

FY-1976

Component SSD

Object Class 25

Planning Level $ [redacted]
(Thousands)

Date 5 December 1969

25X1

Priority	Item	Unit Price	Quantity	Total Price	Justification/Comments
Crucial	[redacted] Consultant Engineering Contract			[redacted]	Previous experience indicates professional engineering consulting services in the amount indicated will be required during this fiscal year for cost estimates, surveys, site preparation planning, etc.
Crucial	GSA Reimbursables				This sum is required for those normally anticipated expenses for which the Center is obliged to fund. Examples of these GSA services are: alterations & adjustments to the air conditioning systems; augmentation of the electrical capability; minor renovations connected with office and equipment space realignment; etc.
Crucial	Eye Examinations				The normal level of cost for the eye examination program.
Crucial	Logistics Equipment Maintenance and Service				Four small job order maintenance contracts and miscellaneous small job requirements. Also, services for gas and oxygen.

25X1

SECRET
(When Filled In)

OBJECT CLASS 26

1972

ESD	195
SSD	43
RED	12
	250

SECRET
(When Filled In)

FY 1972 (FIVE YEAR PLAN)

Date DEC 1968

Component TSSG/ESD

Planning Level $

Object Class 26 (Supplies & Material) (Thousands)

Priority	Item	Unit Price	Quantity	Total Price	Justification/Comments
25X1 Crucial 25X1	[redacted] Printers Spare Parts				Spare parts will be required to replenish the initial spare parts supply for these Printers. 25X1
25X1 Crucial	[redacted] High Precision Stereo Comparator Spare Parts				Spare parts will be required to replenish the initial spare parts supply for the Comparator.
25X1 Crucial	[redacted] Comparators Spare Parts				Spare parts will be required to replenish initial spare parts supply.
25X1 Crucial	[redacted] Data Block Readers Spare Parts				Spare parts will be required for Data Block Reader to be installed in FY 1972.
Crucial	Automatic Target Recognition Spare Parts				Spare parts will be required to replenish spare parts supply.
Crucial	Scan & Search P.I. Station Spare Parts				Spare parts will be required for Station to be installed in FY 1972.
Crucial	Automated Stereo Scanner Spare Parts				Spare parts will be required for the Automated Stereo Scanner to be installed in FY 1972.
Crucial	Miscellaneous Supplies				For expendable and nonexpendable supplies such as optical, mechanical, and electronic hardware.

SECRET
(When Filled In)

FY 1972 (FIVE YEAR PLAN)

Date DEC 1969

Component TSSG/ESD

Planning Level $ ________ (Thousands)

Object Class 26 (Supplies & Material)

iority	Item	Unit Price	Quantity	Total Price	Justification/Comments
ucial	SPARE PARTS for Integrated Information System				Spare parts will be required to replenish the initial spare parts supply for this system.
ucial	Spare parts for 1540 Light Tables				Spare parts will be required for 1540 Light Tables procured and installed during FY 1971.
ucial	Spare parts for [redacted] peri-pheral equipment.				Spare parts will be required to replenish spare parts stock initially procured for computer peripheral equipment in FY 70.
ucial	Parts and supplies for Honeywell DDP-516 Computers				Spare parts will be required to replenish spare parts stock initially procured for these computers.
ucial	Photographic Materials				New types of photographic film and paper for testing the material itself or for use in testing prototype equipment. This is in addition to conventional materials available from the Photographic Laboratory.
ucial	Miscellaneous Supplies				For expendable parts and supplies such as batteries, recording chart paper and mechanical and electrical hardware.
ucial	Mechanical, Electrical and Optical components and material.				For construction of special apparatus as required for testing prototype equipment, and for replacing components which fail in equipment being tested.

25X1

SECRET
(When Filled In)

FY 1972 (FIVE YEAR PLAN)

Date DEC 1968

Component TSSG/ESD

Planning Level $

Object Class 26 (Supplies & Material) (Thousands)

Priority	Item	Unit Price	Quantity	Total Price	Justification/Comments
25X1 Crucial	Miscellaneous				Spare parts for miscellaneous items of exploitation equipment.

SECRET
(When Filled In)

SECRET
(When Filled In)

FY-1972

Date 5 December 1969

25X1 Component SSD

Object Class 26

Planning Level $ [redacted]
(Thousands)

Priority	Item	Unit Price	Quantity	Total Price	Justification/Comments
Crucial	Administrative Supplies			[redacted]	This sum is required to support the Center as a whole in providing administrative items that are not furnished or paid for by the Office of Logistics. Examples of items in this category are Xerox paper, toner, burn bags, and file folders. 25X1
"	Spare Parts				This sum is required to maintain the electronic equipment in the security panel as well as sustaining material handling equipment machines and office machines.
"	Medical Supplies				This sum is required to maintain the stock of drugs and expendable medical supplies necessary for the dispensary.
"	Miscellaneous				Based on previous petty cash expenditures, approximately [redacted] a month will be required to sustain this activity. 25X1

(When Filled In)

FY - 72

Component TSSG/RED

Object Class 26 Supplies

Planning Level $ (Thousands)

Date 5 December 1969

Priority	Item	Unit Price	Quantity	Total Price	Justification/Comments
ecial	Electrical Supplies				Replacements for worn out components. Parts for in-house fabricated experimental equipment. (Tubes, Transistors, Transformers, Relays, etc.)
25X1					
ecial	Mechanical and Optical Supplies				Replacements for worn out or broken components. Components for experiments (lens flanges, shutters, simple lenses, mirrors, filters, etc.)
ecial	Chemical Supplies				Replacement items required to service the Center and to conduct R&D effort.
ecial	Replacement parts for Chemical Instrumentation				To cover replacement lamps and columns for the atomic absorption and gas chromatograph instruments respectively.
ecial	Photographic Supplies (Film, paper, chemicals)				Essential replacement of items required to service the Center and conduct R&D effort.

(When Filled In)

OBJECT CLASS 26

1973

ESD	167
SSD	43
RED	12
	222

FY 1973 (FIVE YEAR PLAN)

Component DSSG/ESD

Planning Level $

Date DEC 1971

Object Class 26 (Supplies & Material) (Thousands)

Priority	Item	Unit Price	Quantity	Total Price	Justification/Comments
25X1					
25X1 Crucial	[redacted] Printers Spare Parts				Spare parts will be required to replenish the initial spare parts supply for these Printers.
25X1 Crucial	[redacted] High Precision Stereo Comparator Spare Parts				Spare parts will be required to replenish the initial spare parts supply for the Comparator.
25X1 Crucial	[redacted]omparators Spare Parts				Spare parts will be required to replenish initial spare parts supply.
Crucial 25X1	[redacted] Data Block Readers Spare Parts				Spare parts will be required for Data Block Reader t be installed in FY 1972.
Crucial	Automatic Target Recognition Spare Parts				Spare parts will be required to replenish spare parts supply.
Crucial	Scan & Search P.I. Station Spare Parts				Spare parts will be required for Station to be installed in FY 1972.
Crucial	Automated Stereo Scanner Spare Parts				Spare parts will be required for the Automated Stereo Scanner to be installed in FY 1972.
Crucial	Miscellaneous Supplies				For expendable and nonexpendable supplies such as optical, mechanical, and electronic hardware.

SECRET

(When Filled In)

FY 1973 (FIVE YEAR PLAN)

Component T&SG/ESD Planning Level $

Object Class 26 (Supplies & Material) (Thousands)

Date DEC 1971

Priority	Item	Unit Price	Quantity	Total Price	Justification/Comments
25X1 Crucial	SPARE PARTS for Integrated Information System				Spare parts will be required to replenish the initial spare parts supply for this system. 25X1
Crucial	Spare parts for 1540 Light Tables				Spare parts will be required for 1540 Light Tables procured and installed during FY 1971.
25X1 Crucial 25X1	Spare parts for [redacted] peripheral equipment.				Spare parts will be required to replenish spare parts stock initially procured for computer peripheral equipment in FY 70.
Crucial 25X1	Parts and supplies for [redacted] Computers				Spare parts will be required to replenish spare parts stock initially procured for these computers.
Crucial	Photographic Materials				New types of photographic film and paper for testing the material itself or for use in testing prototype equipment. This is in addition to conventional materials available from the Photographic Laboratory.
Crucial	Miscellaneous Supplies				For expendable parts and supplies such as batteries, recording chart paper and mechanical and electrical hardware.
Crucial	Mechanical, Electrical and Optical components and material.				For construction of special apparatus as required for testing prototype equipment, and for replacing components which fail in equipment being tested.

SECRET

(When Filled In)

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FY 1973 (FIVE YEAR PLAN)

Component TSSG/ESD

Planning Level $

Date

Object Class 26 (Supplies & Material) (Thousands)

Priority	Item	Unit Price	Quantity	Total Price	Justification/Comments
25X1 Crucial	Miscellaneous	[redacted]			Spare parts for miscellaneous items of exploitation equipment.

[redacted]

ILLEGIB

SECRET
(When Filled In)

SECRET
(When Filled In)

FY-1973

25X1 Component [illegible]SD

Object Class 6

Planning Level $ [redacted]
(Thousands)

Date 5 December 1969

Priority	Item	Unit Price	Quantity	Total Price	Justification/Comments
Crucial	[illegible]nistrative Supplies			[redacted]	This sum is required to support the Center as a whole in providing administrative items that are not furnished or paid for by the Office of Logistics. Examples of items in this category are Xerox paper, toner, burn bags, and file folders. 25X1
"	[illegible]e Parts				This sum is required to maintain the electronic equipment in the security panel as well as sustaining material handling equipment machines and office machines.
"	[illegible]ical Supplies				This sum is required to maintain the stock of drugs and expendable medical supplies necessary for the dispensary.
"	[illegible]ellaneous				Based on previous petty cash expenditures, approximately [redacted] a month will be required to sustain this activity. 25X1

SECRET
(When Filled In)

FY - 73

25X1

Component TSSG/RED

Object Class 26 Supplies

Planning Level $ [ ]
(Thousands)

Date 5 December 1969

ority	Item	Unit Price	Quantity	Total Price	Justification/Comments
25X1					
ial	Electrical Supplies				Replacements for worn out components. Parts for in-house fabricated experimental equipment. (Tubes, Transistors, Transformers, Relays, etc.)
ial	Mechanical and Optical Supplies				Replacements for worn out or broken components. Components for experiments (lens flanges, shutters, simple lenses mirrors, filters, etc.)
ial	Replacement parts for chemical instrumentation				To cover replacement lamps and columns for the atomic absorption and gas chromotograph instruments respectively.
ial	Chemical Supplies				] -- Replacement items required to service the Center and to conduct R&D effort.
ial	Photographic Supplies (Film, Paper, Chemicals)				Essential replacement of items required to service the Center and conduct R&D effort.

SECRET
(When Filled In)

OBJECT CIASS 26

1974

ESD	184
SSD	43
RED	13
	240

(When Filled In)

FY 1974 (FIVE YEAR PLAN)

Component TSSG/ESD Planning Level $ Date DEC 1972

Object Class 26 (Supplies & Material) (Thousands)

Priority	Item	Unit Price	Quantity	Total Price	Justification/Comments
25X1 Crucial	[redacted] Printers Spare Parts				Spare parts will be required to replenish the initial spare parts supply for these Printers.
25X1 Crucial	[redacted] High Precision Stereo Comparator Spare Parts				Spare parts will be required to replenish the initial spare parts supply for the Comparator.
25X1 Crucial	[redacted] Comparators Spare Parts				Spare parts will be required to replenish initial spare parts supply.
25X1 Crucial	[redacted] Data Block Readers Spare Parts				Spare parts will be required for Data Block Reader t be installed in FY 1972.
Crucial	Automatic Target Recognition Spare Parts				Spare parts will be required to replenish spare parts supply.
Crucial	Scan & Search P.I. Station Spare Parts				Spare parts will be required for Station to be installed in FY 1972.
Crucial	Automated Stereo Scanner Spare Parts				Spare parts will be required for the Automated Stereo Scanner to be installed in FY 1972.
Crucial	Miscellaneous Supplies				For expendable and nonexpendable supplies such as optical, mechanical, and electronic hardware.

(When Filled In)

SECRET
(When Filled In)

FY 1974 (FIVE YEAR PLAN)

Component TSSD/ESD

Date DEC 1972

Object Class 26 (Supplies & Material)

Planning Level $ (Thousands)

Priority	Item	Unit Price	Quantity	Total Price	Justification/Comments
25X1 Crucial	SPARE PARTS for Integrated Information System	[redacted]		[redacted]	Spare parts will be required to replenish the initial spare parts supply for this system. 25X1
Crucial	Spare parts for 1540 Light Tables				Spare parts will be required for 1540 Light Tables procured and installed during FY 1971.
Crucial	Spare parts for [redacted] peri-				Spare parts will be required to replenish spare parts stock initially procured for computer peripheral equipment in FY 70.
25X1	pheral equipment.				
Crucial	Parts and supplies for [redacted] Computers				Spare parts will be required to replenish spare parts stock initially procured for these computers.
25X1 25X1					
Crucial	Photographic Materials				New types of photographic film and paper for testing the material itself or for use in testing prototype equipment. This is in addition to conventional materials available from the Photographic Laboratory.
Crucial	Miscellaneous Supplies				For expendable parts and supplies such as batteries, recording chart paper and mechanical and electrical hardware.
Crucial	Mechanical, Electrical and Optical components and material.				For construction of special apparatus as required for testing prototype equipment, and for replacing components which fail in equipment being tested.

SECRET
(When Filled In)

SECRET
(When Filled In)

FY 1974 (FIVE YEAR PLAN)

Component TSSG/ESD

Planning Level $

Object Class 26 (Supplies & Material) (Thousands)

Date DEC 1973

Priority	Item	Unit Price	Quantity	Total Price	Justification/Comments
25X1 Crucial	Miscellaneous				Spare parts for miscellaneous items of exploitation equipment.

SECRET
(When Filled In)

SECRET
(When Filled In)

FY-1974

25X1 Component OSD

Object Class

Planning Level (Thousands)

Date 5 December 1969

Priority	Item	Unit Price	Quantity	Total Price	Justification/Comments
Crucial	Administrative Supplies				This sum is required to support the Center as a whole in providing administrative items that are not furnished or paid for by the Office of Logistics. Examples of items in this category are Xerox paper, toner, burn bags, and file folders. 25X1
"	Office Parts				This sum is required to maintain the electronic equipment in the security panel as well as sustaining material handling equipment machines and office machines.
"	Medical Supplies				This sum is required to maintain the stock of drugs and expendable medical supplies necessary for the dispensary.
"	Miscellaneous				Based on previous petty cash expenditures, approximately [redacted] a month will be required to sustain this activity. 25X1

SECRET
(When Filled In)

SECRET

FY 74

Component TSSG/RED

Object Class 26 Supplies

Planning Level $ [ ] (Thousands)

Date 5 December 1969

Priority	Item	Unit Price	Quantity	Total Price	Justification/Comments
Initial	Electrical Supplies				Replacements for worn out components. Parts for in-house fabricated experimental equipment. (Tubes, Transistors, Transformers, Relays, etc.)
Initial	Mechanical and Optical Supplies				Replacements for worn out or broken components. Components for experiments (lens flanges, shutters, simple lenses mirrors, filters, etc.)
Initial	Photographic Supplies (Film, Paper, Chemicals)				-replacement of items required to service the Center and conduct R&D effort.
Initial	Chemical Supplies				Replacement items required to service the Center and to conduct R&D effort.
Initial	Replacement parts for Chemical Instrumentation				To cover replacement lamps and columns for the atomic absorption and gas chromotograph instruments respectively.

SECRET

(When Filled In)

OBJECT CLASS 26

1975

ESD	210
SSD	43
RED	13
	266

FY 1975 (FIVE YEAR PLAN)

Component DSSG/ESD Planning Level $

Object Class 26 (Supplies & Material) (Thousands)

Date DEC 1973

Priority	Item	Unit Price	Quantity	Total Price	Justification/Comments
25X1 Crucial	[redacted] Printers Spare Parts				Spare parts will be required to replenish the initial spare parts supply for these Printers. 25X1
25X1 Crucial	[redacted] - High Precision Stereo Comparator Spare Parts				Spare parts will be required to replenish the initial spare parts supply for the Comparator.
25X1 Crucial	[redacted] Comparators Spare Parts				Spare parts will be required to replenish initial spare parts supply.
25X1 Crucial	[redacted] Data Block Readers Spare Parts				Spare parts will be required for Data Block Reader t be installed in FY 1972.
Crucial	Automatic Target Recognition Spare Parts				Spare parts will be required to replenish spare parts supply.
Crucial	Scan & Search P.I. Station Spare Parts				Spare parts will be required for Station to be installed in FY 1972.
Crucial	Automated Stereo Scanner Spare Parts				Spare parts will be required for the Automated Stereo Scanner to be installed in FY 1972.
Crucial	Miscellaneous Supplies				For expendable and nonexpendable supplies such as optical, mechanical, and electronic hardware.

FY 1975 (FIVE YEAR PLAN)

Component TSSD/CSD

Date DEC 1969

Object Class 26 (Supplies & Material)

Planning Level $ (Thousands)

Priority	Item	Unit Price	Quantity	Total Price	Justification/Comments
25X1 Crucial 25X1	SPARE PARTS for Integrated Information System				Spare parts will be required to replenish the initial spare parts supply for this system.
Crucial	Spare parts for 1540 Light Tables				Spare parts will be required for 1540 Light Tables procured and installed during FY 1971.
25X1 Crucial 25X1	Spare parts for [redacted] peripheral equipment.				Spare parts will be required to replenish spare parts stock initially procured for computer peripheral equipment in FY 70.
Crucial 25X1	Parts and supplies for [redacted] Computers				Spare parts will be required to replenish spare parts stock initially procured for these computers.
Crucial	Photographic Materials				New types of photographic film and paper for testing the material itself or for use in testing prototype equipment. This is in addition to conventional materials available from the Photographic Laboratory.
Crucial	Miscellaneous Supplies				For expendable parts and supplies such as batteries, recording chart paper and mechanical and electrical hardware.
Crucial	Mechanical, Electrical and Optical components and material.				For construction of special apparatus as required for testing prototype equipment, and for replacing components which fail in equipment being tested.

SECRET
(when filled in)

FY 1975 (FIVE YEAR PLAN)

Component TSSG/ESD

Date DEC 73

Object Class 26 (Supplies & Material)

Planning Level $ (Thousands)

Priority	Item	Unit Price	Quantity	Total Price	Justification/Comments
25X1 Crucial	Miscellaneous				Spare parts for miscellaneous items of exploitation equipment. ILLEGIB

FY-1975

25X1 Component OSD

Object Class 26

Planning Level (Thousands) [redacted]

Date 5 December 1969

Priority	Item	Unit Price	Quantity	Total Price	Justification/Comments
Crucial	Administrative Supplies			[redacted]	This sum is required to support the Center as a whole in providing administrative items that are not furnished or paid for by the Office of Logistics. Examples of items in this category are Xerox paper, toner, burn bags, and file folders. 25X1
"	Spare Parts				This sum is required to maintain the electronic equipment in the security panel as well as sustaining material handling equipment machines and office machines.
"	Medical Supplies				This sum is required to maintain the stock of drugs and expendable medical supplies necessary for the dispensary.
"	Miscellaneous				Based on previous petty cash expenditures, approximately [redacted] a month will be required to sustain this activity. 25X1

 FY - 75

Component TSSG/REP

Object Class 26 Supplies

Planning Level $ _____
(Thousands)

Date 5 December 1969

Priority	Item	Unit Price	Quantity	Total Price	Justification/Comments
Crucial	Electrical Supplies				Replacements for worn out components. Parts for in-house fabricated experimental equipment. (Tubes, Transistors, Transformers, Relays, etc.) 25X1
Crucial	Mechanical and Optical Supplies				Replacements for worn out or broken components. Components for experiments (lens flanges, shutters, simple lenses mirrors, filters, etc.)
Crucial	Replacement parts for Chemical Instrumentation				To cover the replacement lamps and columns for the atomic absorption and gas chromatograph instruments respectively.
Crucial	Photographic Supplies (Film,Paper, Chemicals)				Essential replacement of items required to service the Center and conduct R&D efforts.
Crucial	Chemical Supplies				Replacement items required to service the Center and to conduct R&D effort.

OBJECT CLASS 26

1976

ESD	225
SSD	43
RED	13
	281

SECRET
(When Filled In)

FY 1976 (FIVE YEAR PLAN)

Component TSSG/ESD

Planning Level $

Date DEC 1969

Object Class 26 (Supplies & Material) (Thousands)

25X1

Priority	25X1 Item	Unit Price	Quantity	Total Price	Justification/Comments
Crucial	[redacted] Printers Spare Parts				Spare parts will be required to replenish the initial spare parts supply for these Printers.
25X1					
Crucial	[redacted] - High Precision Stereo Comparator Spare Parts				Spare parts will be required to replenish the initial spare parts supply for the Comparator.
25X1					
Crucial	[redacted] Comparators Spare Parts				Spare parts will be required to replenish initial spare parts supply.
25X1					
Crucial	[redacted] Data Block Readers Spare Parts				Spare parts will be required for Data Block Reader t be installed in FY 1972.
25X1					
Crucial	Automatic Target Recognition Spare Parts				Spare parts will be required to replenish spare parts supply.
Crucial	Scan & Search P.I. Station Spare Parts				Spare parts will be required for Station to be installed in FY 1972.
Crucial	Automated Stereo Scanner Spare Parts				Spare parts will be required for the Automated Stereo Scanner to be installed in FY 1972.
Crucial	Miscellaneous Supplies				For expendable and nonexpendable supplies such as optical, mechanical, and electronic hardware.

SECRET
(When Filled In)

SECRET
(When Filled In)

FY 1976 (FIVE YEAR PLAN)

Component TSSD/ESD

Date DEC 1968

Object Class 26 (Supplies & Material)

Planning Level $ (Thousands)

Priority	Item	Unit Price	Quantity	Total Price	Justification/Comments
25X1 Crucial	SPARE PARTS for Integrated Information System				Spare parts will be required to replenish the initial spare parts supply for this system. 25X1
Crucial	Spare parts for 1540 Light Tables				Spare parts will be required for 1540 Light Tables procured and installed during FY 1971.
25X1 Crucial 25X1	Spare parts for peripheral equipment.				Spare parts will be required to replenish spare parts stock initially procured for computer peripheral equipment in FY 70.
Crucial ILLEGIB	Parts and supplies for Computers				Spare parts will be required to replenish spare parts stock initially procured for these computers.
Crucial	Photographic Materials				New types of photographic film and paper for testing the material itself or for use in testing prototype equipment. This is in addition to conventional materials available from the Photographic Laboratory.
Crucial	Miscellaneous Supplies				For expendable parts and supplies such as batteries, recording chart paper and mechanical and electrical hardware.
Crucial	Mechanical, Electrical and Optical components and material.				For construction of special apparatus as required for testing prototype equipment, and for replacing components which fail in equipment being tested.

SECRET
(When Filled In)

(When Filled In)

FY 1978 (FIVE YEAR PLAN)

Component TSSG/ESD

Planning Level $

Object Class 26 (Supplies & Material) (Thousands)

Date DEC 1976

Priority	Item	Unit Price	Quantity	Total Price	Justification/Comments
25X1 ILLEGIB Crucial	Miscellaneous				Spare parts for miscellaneous items of exploitation equipment.

FY-1976

25X1 Component OSD

Object Class 26

Planning Level (Thousands) [redacted]

Date 5 December 1969

Priority	Item	Unit Price	Quantity	Total Price	Justification/Comments
Crucial	Administrative Supplies			[redacted]	This sum is required to support the Center as a whole in providing administrative items that are not furnished or paid for by the Office of Logistics. Examples of items in this category are Xerox paper, toner, burn bags, and file folders. 25X1
"	Office Parts				This sum is required to maintain the electronic equipment in the security panel as well as sustaining material handling equipment machines and office machines.
"	Medical Supplies				This sum is required to maintain the stock of drugs and expendable medical supplies necessary for the dispensary.
"	Miscellaneous				Based on previous petty cash expenditures, approximately [redacted] a month will be required to sustain this activity. 25X1

(When Filled In)

25X1 Element TSSG/RED

Object Class 26 Supplies

Planning Level $ [redacted] (Thousands)

Date 5 December 1969

Priority	Item	Unit Price	Quantity	Total Price	Justification/Comments
25X1 Crucial	Electrical Supplies			[redacted]	Replacements for worn out components. Parts for in-house fabricated experimental equipment. (Tubes, Transistors, Transformers, Relays, etc.)
Crucial	Mechanical and Optical Supplies				Replacements for worn out or broken components. Components for experiments (lens flanges, shutters, cimple lenses mirrors, filters, etc.)
Crucial	Replacement parts for chemical instrumentation				To cover replacement lamps and columns for the atomic absorption and gas chromotograph instruments respectively.
Crucial	Photographic Supplies (Film, Paper, Chemicals)				Essential replacement of items required to service the Center and conduct R&D effort.
Crucial	Chemical Supplies				Replacement items required to service the Center and to conduct R&D effort.

SECRET

(When Filled In)

OBJECT CLASS 31

1972

ESD	27
APSD	160
SSD	10
RED	129
	326

Component [redacted] FCD

Object Class 31 (Equipment)

Planning Level $ _____
(Thousands)

FY 72(FIVE YEAR PLAN)

Date DEC 1971

Priority	Item	Unit Price	Quantity	Total Price	Justification/Comments
Crucial 25X1	Electronic Instruments				General and special purpose electrical/electronic instruments, sensors and recorders for new requirements and to replace worn out or obsolete items as needed in the performance of test, evaluation and maintenance work. 25X1
Crucial	Photographic and Optical Equipment				General and special purpose instruments and devices for measuring photographic and optical performance and properties. Specifically, we expect to procure MTF measuring instrumentation early in this period.
Crucial	Mechanical Equipment				General and special purpose mechanical instruments, tools, gages, scales and apparatus necessary to test, measure, trouble-shoot, repair and maintain the Center's equipment.
Crucial	Standards and Calibration Equipment				Standards and calibration devices for use in comparing and calibrating both test instruments and precision mensuration equipment.
Crucial	Exploitation Equipment				Commercially available exploitation equipment procured specifically for the purpose of testing and evaluating them for possible adoption as an item of Center equipment.
Crucial	Shop Equipment				For various standard machine, electronic and optical shop equipment to be used in equipment modification and parts fabrication and assembly.

(When Filled In)

FY 72

Component APSD

Planning Level $-
(Thousands)

Date 10 DEc 1969

Object Class 31

Priority	Item	Unit Price	Quantity	Total Price	Justification/Comments
25X1 Crucial	Image Comparison Microscope		1		This is an additional [redacted] four-stage comparison instrument for utilization in the IEB. Volumes of material and increases in the number of analysts will necessitate purchase of this equipment. Delays in time-oriented requirements are anticipated without the proper instrumentation. 25X1 25X1
Crucial	Image Restoration Laboratory		1		The APSD/IEB is in need of a chemical/optical enhancement laboratory to fulfill the ever-increasing requirements of the PIs. The mass reproduced materials supplied by the manufacturer and the Center lab are frame oriented rather than target oriented and even in special cases where target oriented chips are reproduced, only overall information transfer is considered. The IEB analysts must request assistance of the PSG lab or the manufacturers' facilities at present when a requirement is generated by the PIs. This does not provide a near real time capability nor in most cases is the desired product received. The branch would also produce engineering oriented reproductions for evaluation reports where again specialized information within a frame of photography is enhanced.
			TOTAL:		

SECRET
(When Filled In)

FY-1972

Date 5 December 1969

25X1 Component SSD

Planning Level (Thousands) [ ]

Object Class 31

Priority	Item	Unit Price	Quantity	Total Price	Justification/Comments
Crucial	Equipment			[ ]	This sum of money is required to replace electronically operated office machines that are superannuated and to provide additional electrical typewriters for anticipated increase in the secretarial compliment.

25X1

SECRET
(When Filled In)

SECRET
(When Filled In)

FY-72

Date 5 December 1969

Component TSSG/RED

Object Class 31 Equipment

Planning Level $
(Thousands)

Priority	Item	Unit Price	Quantity	Total Price	Justification/Comments
~~25X1~~ Crucial	Forced draft oven		1		EL has no facility for heating experimental specimens in a precise fashion. The forced draft feature of this unit will provide such capability in the useful temperature range of 40° -- 200°C.
Crucial	Laser		1		Blue Green laser to allow direct readout of the Analog Image Manipulation system. The initial experiments are being done with existing Red lasers which were adequate for experimentation but pose severe limitations for routine use.
Crucial	Large Optical Flats Large Diameter Good Quality Lenses		12 4		Required to extend the small format results of the Analog Image Manipulation program to larger format for routine operational use. The increase in area would be approximately 35X.
Crucial	Microscope Breadboard Set		1		Required to breadboard a special microscope which utilizes the techniques developed in the Analog Image Manipulation program.
Crucial	Monochromator, Special Photomultiplier for Gamma Photometer and Calibrated source		1		With the acquisition of these accessories spectral-radiometric readings can be made of small areas on color photography. From this information CIE coordinates could be determined and imaged color could be exactly defined.
Essential	Color Eye Colorimeter		1		This device would provide direct CIE coordinates from colored samples and larger area photography. This would be necessary for determination of color film reproduction of specific objects.
Essential	Book of Munsell Color Chips		1		These chips would serve as input sources in determing color response of photographic materials.
Crucial	High Quality Sensitometer		1		This device would be capable of producing accurate, repeatable exposures in film so processing could be monitored and film evaluated under a white light exposure. See attached sheet.

SECRET

FY-72

SECRET

(When Filled In)

Component TSSG/RET

Object Class 31 Equipment

Planning Level (Thousands) $ Total included on attached sheet.

Date 5 December 1969

25X1

Priority	25X1 Item	Unit Price	Quantity	Total Price	Justification/Comments
Crucial	[redacted]apid Color Processor Model 16-K		1		This is a temperature controlled processor for rapid development of color print type material.
25X1					
[illegible]table	Card punch/line printer		1		This will enable EL personnel to obtain a listing of R&D information, which has been stored on punch cards, for various NPIC components.
[illegible]rucial	Digitized Macrodensitometer for Computer Input		1		This device would produce computer compatible density data that could be manipulated for curve plotting, gamma measurement and statistical analysis for R&D.
Crucial	Desk top computer		1		Present laboratory calculators do not have sufficient capability to do very many of the tasks required to reduce experimental data. They can't be programmed to handle complex equation. This instrument is also needed to help in the reduction and analysis of in-house Human Factors data.
25X1	[redacted]				
[illegible]rucial	Micro Camera		1		Needed to produce high quality reticles and resolution targets.
[illegible]rucial	Un-Conventional Processors		1		If we are to evaluate non-conventional photographic materials, we will need the proper equipment to precisely expose and process these materials. Since it is not known which materials will be available at what time, K is allowed each year to provide the necessary equipment. Cost includes processors for two types of materials.
[illegible]sirable	Ultrasonic Cleaner		1		To get sufficient cleanliness for vacuum coating and AIR.
[illegible]sirable	Thickness Gauge		1		Needed to increase the labs capability to deposit optical coatings accurately.

SECRET

Sensitometer

Evaluation of unconventional photographic materials requires experience and processing equipment not presently on hand. Dry Silver, free radical and diazo types characterize the class of materials. Present judgment holds it unlikely that a single equipment will be capable of appropriate exposure and processing for each unconventional material. It is more probably that a specific sensitometric processor will be required for each material subjected to laboratory evaluation.

OBJECT CLASS 31

1973

ESD	27
APSD	110
SSD	10
RED	52
	226

FY 73 (FIVE YEAR PLAN)

Component [redacted]

Date DEC 1972

Object Class 31 (Equipment)

Planning Level $ _____
(Thousands)

Priority	Item	Unit Price	Quantity	Total Price	Justification/Comments
25X1 Crucial	Electronic Instruments				General and special purpose electrical/electronic instruments, sensors and recorders for new requirements and to replace worn out or obsolete items as needed in the performance of test, evaluation and maintenance work.
Crucial	Photographic and Optical Equipment				General and special purpose instruments and devices for measuring photographic and optical performance and properties. Specifically, we expect to procure MTF measuring instrumentation early in this period.
Crucial	Mechanical Equipment				General and special purpose mechanical instruments, tools, gages, scales and apparatus necessary to test, measure, trouble-shoot, repair and maintain the Center's equipment.
Crucial	Standards and Calibration Equipment				Standards and calibration devices for use in comparing and calibrating both test instruments and precision mensuration equipment.
Crucial	Exploitation Equipment				Commercially available exploitation equipment procured specifically for the purpose of testing and evaluating them for possible adoption as an item of Center equipment.
Crucial	Shop Equipment				For various standard machine, electronic and optical shop equipment to be used in equipment modification and parts fabrication and assembly.

SECRET
(When Filled In)

FY 73

Component APSD

Object Class 31

Planning Level $ —
(Thousands)

Date

Priority	Item	Unit Price	Quantity	Total Price	Justification/Comments
1	Microscope Viewing Tables with Motor Winds		5		25X1 This is in replacement for old obsolete viewing tables.
1	Laboratory Accessories				This is for replacements in the Image Enhancement Laboratory.
1	Viewing equipment for color evaluation and analysis.		5		The IEB is in need of specialized viewers for use in the evaluation of color imagery. Basically, the viewers would have a standard light source of a known temperature (Kelvin) a method of changing the temperature without changing the intensity and a means of recording the change.
			TOTAL:		

SECRET

SECRET
(When Filled In)

FY-1973

25X1

Component SSD

Object Class 31

Planning Level $ [redacted]
(Thousands)

Date 5 December 1969

Priority	Item	Unit Price	Quantity	Total Price	Justification/Comments
Crucial	[redacted]ment			[redacted]	This sum of money is required to replace electronically operated office machines that are superannuated and to provide additional electrical typewriters for anticipated increase in the secretarial compliment. 25X1

SECRET
(When Filled In)

SECRET
(When Filled In)

FY - 73

25X1

Component TSSG/REF

Planning Level (Thousands) $

Date 5 December 1969

Object Class 31 Equipment

Priority	Item	Unit Price	Quantity	Total Price	Justification/Comments
Crucial	Non-Conventional Processor		2		Continuation and improvement in EL's capabilities for evaluating non-conventional photographic materials.
Crucial	Real Time Imagery Experimental equipment				During the next two years real time reconnaissance systems will be a reality. This expenditure will provide equipment for basic experimentation with imagery so acquired.
Essential	Misc. Interference Filters		15		These filters allow precise exposure of narrow wavelength bands as would be necessary to isolate individual layers of tripack color film.
Essential	NuArc Printer Lamp		1		To work with interference filters above.
Crucial	Laser		1		Existing lasers will be beyond their life expectancy and replacement be more practical. The only relatively new laser will be in use in a specific program. The others will all be vintage 1965 or older.
25X1	25X1				

SECRET
(When Filled In)

OBJECT CLASS 31

1974

ESD	22
APSD	392
SSD	10
RED	129
	553

FY 74 (FIVE YEAR PLAN)

Component OSSO/ESD

Planning Level $
(Thousands)

Date DEC 1972

Object Class 31 (Equipment)

Priority	Item	Unit Price	Quantity	Total Price	Justification/Comments
25X1					
ucial	Electronic Instruments				General and special purpose electrical/electronic instruments, sensors and recorders for new requirements and to replace worn out or obsolete items as needed in the performance of test, evaluation and maintenance work.
ucial	Photographic and Optical Equipment				General and special purpose instruments and devices for measuring photographic and optical performance and properties.
ucial	Mechanical Equipment				General and special purpose mechanical instruments, tools, gages, scales and apparatus necessary to test, measure, trouble-shoot, repair and maintain the Center's equipment.
ucial	Standards and Calibration Equipment				Standards and calibration devices for use in comparing and calibrating both test instruments and precision mensuration equipment.
ucial	Exploitation Equipment				Commercially available exploitation equipment procured specifically for the purpose of testing and evaluating them for possible adoption as an item of Center equipment.
ucial	Shop Equipment				For various standard machine, electronic and optical shop equipment to be used in equipment modification and parts fabrication and assembly.

25X1

SECRET
(When Filled In)

FY 74

Component APSD

Date 4 December 1969

Object Class 31

Planning Level—$
(Thousands)

Priority	Item	Unit Price	Quantity	Total Price	Justification/Comments
1	Automatic High Resolution Rear Projection viewer		1		This equipment will be used in monitoring the various large volumes of reproductions that come into the Center. 25X1
1	Photomicrograph		1		This will be a replacement for present photomicrographic equipment.
1	Laboratory accessories				Replacement for items in the Image Enhancement Laboratory.
1	Viewing equipment for analyzing multiple spectra-zonal products		1		This equipment will be necessary to provide evaluation of simultaneous products taken by a multi-spectral acquisition system.
			TOTAL:		

SECRET
(When Filled In)

FY-1974

25X1 Component SSD

Object Class 32

Planning Level (Thousands) [ ]

Date 5 December 1969

Priority	Item	Unit Price	Quantity	Total Price	Justification/Comments
Crucial	ipment			[ ]	This sum of money is required to replace electronically operated office machines that are superannuated and to provide additional electrical typewriters for anticipated increase in the secretarial compliment. 25X1

SECRET
(When Filled In)

SECRET
(When Filled In)

FY-74

Component TSSG/RED

Date 5 December 1969

25X1

Object Class 31 Equipment

Planning Level $ [redacted]
(Thousands)

Priority	Item	Unit Price	Quantity	Total Price	Justification/Comments
25X1 Crucial	Real Time Imagery Experimental Equipment	[redacted]		[redacted]	To expand the capability for basic experimentation and analysis of the output of real time reconnaissance systems.
Crucial	Sensitometric Processor		1		Continuation and improvements in the EL's capabilities for evaluating non-conventional photographic materials.
Essential	Replacement Filters (interference)		7		Filters are delicate and are easily broken; therefore, replacements must be available.
Essential	Replacement Munsell Chips		1		Chips will be handled and are easily damaged. Replacements must then be available.
Essential	Colorimeter Accessories		1		Modified light source filters if a new standard "D" source is established.

25X1

SECRET
(When Filled In)

OBJECT CLASS 31

1975

ESD	22
APSD	170
SSD	10
RED	100
	302

FY 75 (FIVE YEAR PLAN)

Component OSSC/OSP

Object Class 31 (Equipment)

Planning Level (Thousands) $

Date DEC [illegible]

Priority	Item	Unit Price	Quantity	Total Price	Justification/Comments
25X1 Crucial	Electronic Instruments				General and special purpose electrical/electronic instruments, sensors and recorders for new requirements and to replace worn out or obsolete items as needed in the performance of test, evaluation and maintenance work. 25X1
Crucial	Photographic and Optical Equipment				General and special purpose instruments and devices for measuring photographic and optical performance and properties.
Crucial	Mechanical Equipment				General and special purpose mechanical instruments, tools, gages, scales and apparatus necessary to test, measure, trouble-shoot, repair and maintain the Center's equipment.
Crucial	Standards and Calibration Equipment				Standards and calibration devices for use in comparing and calibrating both test instruments and precision mensuration equipment.
Crucial	Exploitation Equipment				Commercially available exploitation equipment procured specifically for the purpose of testing and evaluating them for possible adoption as an item of Center equipment.
Crucial	Shop Equipment				For various standard machine, electronic and optical shop equipment to be used in equipment modification and parts fabrication and assembly.

(When Filled In)

(When Filled In)

Component APSD FYs 75, 76

Object Class 31 Planning Level $ (Thousands)

Date 4 December 1969

Priority	Item	Unit Price	Quantity	Total Price	Justification/Comments
					25X1
					With the possible exception of the need for an advanced automatic high resolution rear projection viewer for monitoring reproduction the only other expenditures that can be envisioned are replacement items in laboratory accessories and in viewing tables.
			TOTAL:		

FY-1975

25X1

Component [redacted]

Object Class [redacted]

Planning Level (Thousands) [redacted]

Date 5 December 1969

Priority	Item	Unit Price	Quantity	Total Price	Justification/Comments
Crucial	[redacted]ment			[redacted]	This sum of money is required to replace electronically operated office machines that are superannuated and to provide additional electrical typewriters for anticipated increase in the secretarial compliment. 25X1

(When Filled In)

SECRET
(When Filled In)

FY - 75

Component TSSG/RED

Date 5 December 1969

Object Class 31 Equipment

Planning Level $
(Thousands)

Priority	Item	Unit Price	Quantity	Total Price	Justification/Comments
25X1 Crucial	Real Time Imagery Experimental Equipment				To expand the capability for basic experimentation and analysis of the output of real time reconnaissance systems.
25X1 Crucial	Sensitometric Processor				Continuation and improvements of the Laboratory's capabilities in evaluating non-conventional photographic materials.
Essential	Ektamatic Processor		1		A device for stabilization print and film processing for rapid access work.
Essential	Color Resolution Targets		10		Needed for measuring resolution of various color films from different colors.
Essential	Misc. Colorimetric Supplies		1		Recalibration of equipment, and modification of available equipment will be needed to update standards, etc.

SECRET
(When Filled In)

OBJECT CLASS 31

1976

ESD	22
APSD	170 (same as FY 75)
SSD	10
RED	75
	277

SECRET
(When Filled In)

FY 76 (FIVE YEAR PLAN)

Component ESSG/ESD

Object Class 31 (Equipment)

Planning Level (Thousands) $

Date DEC 1975

Priority	Item	Unit Price	Quantity	Total Price	Justification/Comments
25X1 rucial	Electronic Instruments				General and special purpose electrical/electronic instruments, sensors and recorders for new requirements and to replace worn out or obsolete items as needed in the performance of test, evaluation and maintenance work. 25X1
rucial	Photographic and Optical Equipment				General and special purpose instruments and devices for measuring photographic and optical performance and properties.
rucial	Mechanical Equipment				General and special purpose mechanical instruments, tools, gages, scales and apparatus necessary to test, measure, trouble-shoot, repair and maintain the Center's equipment.
rucial	Standards and Calibration Equipment				Standards and calibration devices for use in comparing and calibrating both test instruments and precision mensuration equipment.
rucial	Exploitation Equipment				Commercially available exploitation equipment procured specifically for the purpose of testing and evaluating them for possible adoption as an item of Center equipment.
rucial	Shop Equipment				For various standard machine, electronic and optical shop equipment to be used in equipment modification and parts fabrication and assembly.

SECRET
(When Filled In)

(When Filled In)

FY-1976

Date 5 December 1969

25X1 Component OSD

Object Class 32

Planning Level $ [ ]
(Thousands)

Priority	Item	Unit Price	Quantity	Total Price	Justification/Comments
Crucial	Equipment			[ ]	This sum of money is required to replace electronically operated office machines that are superannuated and to provide additional electrical typewriters for anticipated increase in the secretarial compliment. 25X1

SECRET
(When Filled In)

25X1

Component TSSG/RED

Object Class 31 Equipment

Planning Level $ [redacted]
(Thousands)

Date 5 December 1969

Priority	Item	Unit Price	Quantity	Total Price	Justification/Comments
Crucial	Real Time Imagery Experimental Equipment	[redacted]		[redacted]	To expand the capability for basic experimentation and analysis of the output of real time reconnaissance systems.
Crucial	Improvements to Sensitometric Processor				Continuation and improvement in EL's capabilities for evaluating non-conventional photographic materials.
Essential	Misc. Photo-Equipment in support of real time systems				Photographic Apparatus (processing, exposing, etc.) will need modification to be used in combination with CRT type imagery.

25X1

25X1

SECRET
(When Filled In)

OBJECT CLASS 41

1972-1976

SECRET

(When Filled In)

FY - 72 -- 76

Component TSSC/RED

25X1

Object Class 41 Grant Program

Planning Level $ [redacted]
(Thousands)

Date 5 December 1969

Priority	Item	Unit Price	Quantity	Total Price	Justification/Comments
Crucial	RIT Grant Program			[redacted]	Will provide low cost senior and graduate level research investigators in the fields of photo-physics and photo-chemistry and other areas of mutual interest. Planned for the [redacted] level for each of the years FY-72 -- 76. 25X1

25X1

SECRET